THE
RAILWAY GAZETTE
A Journal of Management, Engineering and Operation
INCORPORATING
The Railway Engineer · TRANSPORT · The Railway News
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DIESEL RAILWAY TRACTION SUPPLEMENT

The June issue of THE RAILWAY GAZETTE *Supplement, illustrating and describing developments in Diesel Railway Traction, is now ready, price* 1*s.*

GOODS FOR EXPORT

The fact that goods made of raw materials in short supply owing to war conditions are advertised in this paper should not be taken as indicating that they are available for export

POSTING "THE RAILWAY GAZETTE" OVERSEAS

We would remind our readers that there are many overseas countries to which it is not permissible for private individuals to send printed journals and newspapers. THE RAILWAY GAZETTE *possesses the necessary permit and facilities for such dispatch. We would emphasise that copies addressed to places in Great Britain should not be re-directed to places overseas*

REDUCTION IN SIZE OF PAGE

To economise in paper our readers will observe a slight reduction in the size of THE RAILWAY GAZETTE *in that the size of the page has been reduced from* 9 *in.* × 12 *in. to* 8½ *in.* × 11½ *in. The type area of the page remains the same, namely,* 7 *in.* × 10 *in., but the surrounding margins have been reduced. This of course detracts from the appearance of the paper, but is one of the exigencies of the war*

TO CALLERS AND TELEPHONERS

Until further notice our office hours are:
Mondays to Fridays 9.30 *a.m. till* 5.30 *p.m.*
The office is closed on Saturdays

ANSWERS TO ENQUIRIES

By reason of staff shortage due to enlistment, we regret that it is no longer possible for us to answer enquiries involving research, or to supply dates when articles appeared in back numbers, either by telephone or by letter

ERRORS, PAPER, AND PRINTING

Owing to shortage of staff and altered printing arrangements due to the war, and less time available for proof reading, we ask our readers' indulgence for typographical and other errors they may observe from time to time, also for poorer paper and printing compared with pre-war standards

Travel at Whitsuntide

THE Ministry of War Transport has supplemented its appeals to the public to refrain as far as possible from travel at Whitsuntide by the issue of restrictions on transport over that period. These restrictions will come into force on Friday, June 11, and from then until Tuesday, June 15, both days inclusive, there will be no more long-distance trains than the maximum number run on an ordinary similar day, in May last year, nor will there be any extra buses for holiday travel. If a train is run in parts, each part will count as a separate train. Race meetings will take place during the restricted period at Ascot and Pontefract, but in neither case will there be additional travelling facilities. As in the case of recent holiday periods, steps will be taken to adjust service leave so as to reduce travel to the minimum; no personnel will be despatched on privilege leave from the Friday to the Tuesday, and personnel who would normally be returning from 7 days' leave during the period will have their leave extended to 9 days. Normally, concession fares for service personnel on 48-hour leave will not be available for rail journeys beyond 20 miles. Free or assisted travel for evacuated Government staff, transferred Civil Defence personnel, and industrial transferees will be suspended, as also will reduced fares for one or three-day trips by relatives visiting evacuees.

Railway Crossings in Wartime

The normal procedure for stopping or diverting highways is by means of an Order of Quarter Sessions made on the signature of two Justices, and this is a somewhat involved matter, based on the Highway Act of 1835. It is obvious that this procedure would be too protracted and complicated to meet wartime emergency, and provision for this was made under the Defence General Regulations, 1939. This provided that any person so authorised by the Minister of War Transport (or in Northern Ireland the Minister of Home Affairs) may for any purposes connected with the securing of the public safety, the defence of the realm, the efficient prosecution of the war, or the maintenance of supplies and services essential to the life of the community, either construct a railway across any highway (either by means of a level crossing, or a bridge under or over a highway), or alter, improve, or reconstruct any existing bridge carrying a highway over a railway or a railway over a highway, or the approaches to any such bridge, or widen any existing level crossing over a highway. The Minister of War Transport may also, by Order, provide for stopping or diverting any highway passing through land used or intended to be used for the purposes of a railway, and prohibit or restrict the exercise of any right-of-way over any such land. These wide powers enable essential railway works to be effected with the minimum of formality and the maximum of facility, but it will provide an interesting post-war problem (should any works so undertaken need to be retained) as to how emergency structures are to be brought within the framework of the normal peacetime law, with due regard to rights of property. The London Midland & Scottish Railway (Bushbury Sidings) Order, 1942, was made under these powers.

B.A. Western Railway Moratorium Extension

The latest manifestation of Argentine railway troubles is a circular by the directors of the Buenos Ayres Western Railway Company to holders of the 5 per cent. and 4 per cent. debenture stocks, and the 5 per cent. three-year secured notes, seeking a year's renewal of the moratorium scheme which was approved by the court in July, 1941. Under this scheme a moratorium was granted for two years to July 1, 1943, with powers of extension to 1945. The directors say that the unfavourable prospects of the current harvest, due to the severe damage to crops caused by the serious drought in December, January, and February last, coupled with heavy losses on exchange, give cause for anxiety as to the maintenance of the company's revenue during the coming year. Further, the continuous increase in the cost of materials, and mounting requirements for essential repairs and renewals, make it impossible to expect any further economy in expenditures which are already rigidly controlled. The Debenture Stockholders' and the Noteholders' Committees have been consulted by the board, and have concurred in the proposals. During the moratorium period the company may not without sanction sell the railways, make any payments to the Buenos Ayres Great Southern Railway Company, or pay any dividends on the share capital. A meeting will be held on June 9 to consider the proposal.

Central Argentine Railway Debenture Arrears

The board of the Central Argentine Railway Company has announced that the Argentine Government has only just granted the railways the special rate of 16 pesos to the £ for financial

remittances. For this reason no remittances had taken place during this year until recently. The accumulations of some five months have now arrived in London, and the following substantial payments on account of arrears of interest on the 4 per cent. debenture stock are possible: ½ per cent., which is the balance due in respect of the half-year ended December 31, 1940; 2 per cent., in respect of the half-year ended June 30, 1941; and 2 per cent., in respect of the half-year ended December 31, 1941. The 4 per cent. debenture stock, with other prior charges, is subject to a moratorium to the end of the current year. The reference to the Argentine authorities having only just granted the special rate of 16 pesos apparently means that the company has not been able to secure exchange at that figure hitherto. This rate has been granted the companies for twelve-month periods, the last of which expired at the end of last year. It would appear, therefore, that there has been some delay in its renewal on this occasion, possibly because of consideration of the application by the companies for a more favourable rate, which has been rejected.

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Mr. A. C. Rose

Mr. A. C. Rose, whose death is recorded on page 563, and who, at the time of his retirement early this year, was Deputy General Manager of the Madras & Southern Mahratta Railway, was one of the comparatively few men who have spent the greater part of their careers in signalling work and then have transferred to administrative departments. There have been some examples of this in the United States, but, generally speaking, the signal engineer remains one to the end. Mr. Rose began his career on a line on which many who later have distinguished themselves in the railway world received their very efficient training, the old Midland & Great Northern Joint Railway. He afterwards became identified with signalling overseas, on which subject he wrote several instructive papers and articles, and in the development of which he took a prominent part. He retained his interest in signalling after transferring to the General Manager's office, and contributed criticisms to the *Quarterly Technical Bulletin* on various aspects of the subject. All who were privileged to enjoy his friendship will ever remember him with affection.

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Registration of Mexican Railway Bonds

A number of Mexican railways bonds are concerned in a further development of the debt agreement of November 5, 1942, between the Mexican Government and the International Committee of Bankers. That agreement provides for reduced interest payments and redemption over a twenty or twenty-five-year period. The debt agreement has been approved by the Mexican Congress, but it has still to be submitted to individual bondholders. Under the plan the nominal value of Government loans is to be written down by 80 per cent. on an American dollar basis, but because of wartime appreciation in the dollar, it will involve a reduction in the sterling value of rather less—about 75 per cent. If the scheme is accepted in time, it is intended to resume interest payments on the written-down Government bonds this year; no interest payment has been made since 1928 to the holders of the bonds. In furtherance of the plan, the owners of the bonds are now invited to have their stocks registered as non-enemy owned. Details of the securities affected and the registering agents appear on page 568.

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Army Transport for Essential Workers

No more striking indication has been provided of the intention of the Government to maintain essential transport services, irrespective of industrial disturbances, and of the cordial agreement of the general public to such a course, than the provision of military transport to replace facilities withdrawn as the result of the bus strike in various provincial areas. The employees of the Yorkshire Traction Co. Ltd., operating from depots at Barnsley, Huddersfield, Doncaster, etc., were the first to withdraw their labour because of the rejection by the arbitration tribunal of the claim for higher wages and better conditions. The strike spread over a wide area, involving no fewer than thirteen private and municipal undertakings in south and west Yorkshire, and the Yorkshire Traction Company's strike has continued against the advice of the national executive of the union, although other transport workers have called off their strike in view of the summoning of national delegate conferences. Military transport has been in use since Friday, May 14 (the third day of the strike) for essential workers, and on May 25 Major F. S. Eastwood, the North-Eastern Regional Transport Commissioner, sent more military vehicles to Barnsley. In addition, miners and other workers, and school children, are being carried in pit lorries and the vehicles of private haulage contractors. It is encouraging that the authorities have shown in no uncertain manner their firm intention of maintaining the essential war effort of the country, irrespective of the rights or wrongs of individual differences.

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Salvage—with Discretion

The intensive salvage drive in the London area, which is being launched tomorrow and will last a fortnight, is designed primarily to produce paper for re-pulping, but book recovery is also a keynote. In this connection, the Directorate of Salvage & Recovery, Ministry of Supply, has issued a timely reminder that foreign works of reference which business and industrial organisations may have in their possession may be of great value to the nation. All guides, maps, foreign directories, and trade catalogues, referring to countries on the Continent of Europe, can be used advantageously by the Ministry of Economic Warfare. Such literature may contain information of vital importance to our war effort. Foreign technical dictionaries particularly are wanted. Over a year ago, Göring forbade the reproduction of any pictures of factories in advertisements and catalogues. Orders also were issued for such pictures to be cut off or overprinted, but fortunately great quantities of this literature were sent to Britain before the war, and are now beyond the power of industrious German scissors. Technical engineering dictionaries in a European language and European motor guides are specially desired. Any such literature which readers are willing to make available for the war effort, and which need not be returned, should be sent to Room 629, Ministry of Economic Warfare, Lansdowne House, Berkeley Square, London, W.1. Details of books which can only be loaned are also welcome.

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Exit the Private Railway in Europe

One of the changes which is taking place throughout Europe during the war, and therefore passing almost unnoticed, is the virtual disappearance of the private railway in enemy, enemy-occupied, and neutral countries. Four years ago, despite the fact that the trunk railway systems of most European countries have been owned by the State for many years past, there were important private railway systems, such as those of Sweden and Germany. In the "Universal Directory of Railway Officials and Railway Year-Book" for 1939-40, for example, no fewer than 81 private railways were recorded in Sweden and 62 in Germany, and this represented only a selection of the more important undertakings. Doubtless war needs and strategic considerations have played their part in influencing the decisions of the Governments to nationalise such systems, and in one or two cases concessions have expired in the normal way, and not been renewed. The net result of this trend would seem to be that, when peace is restored, few railway lines (other than light railways and lines of secondary importance) will remain on the European continent in any other hands than those of Governments.

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New Danube Bridge

One of the long-standing proposals for improved Balkan railway communication which is likely to be put in hand under the impetus of war conditions is that for a rail and road bridge across the River Danube between Russe (Bulgaria) and the Roumanian port of Giurgevo. Plans for this bridge have been brought forward periodically since 1881, notably in 1895, 1898, 1909, 1914, and 1918, but nothing has come of them. The idea has been discussed again in recent years, and an agreement to build the bridge was signed by Roumania and Bulgaria in October last. The bridge is to be 3,280 ft. long, crossing the Danube at a point where it is 2,624 ft. wide. The bridge is to carry a double-line standard-gauge railway line forming the connecting link between the Sofia—Russe and Bucharest—Giurgevo lines; a motor road; and a footpath for pedestrians. The bridge will supersede the railway ferry service between the two ports which was instituted in the earlier stages of the present war, and which has the disadvantage that it cannot operate in winter when the Danube is frozen. This year the service was resumed on March 15.

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Simplifying American Meal Service

Profound changes have been forced on American dining car service under the compulsion of war conditions. Hitherto the simple *table d'hôte* meal has been the exception rather than the rule. Elaborate *ménus* have offered the diner an extensive choice of viands, and the arrangement of three seats abreast within the ample construction gauge of American stock has given an amount of elbow-room unknown in the cars on this side of the

Atlantic. Many of the American dining cars have accommodated only 36 passengers at a sitting, and even in peacetime queues of passengers awaiting their turn to feed have been no unusual feature of United States railway travel. In the U.S.A., indeed, the cars have been used largely for advertisement rather than for profit to such an extent that the Milwaukee Road is reputed to have lost $60,000 a year in the operation of its first dining cars on the Pioneer Limited. But these cars, like the Fred Harvey car service on the Santa Fe, and many other restaurant cars that have helped to popularise individual trains in a remarkable degree, may have justified, in part at least, the losses incurred in their operation. Now, however, these past methods are being compulsorily abandoned. For a long time the railways west of Chicago have been simplifying their restaurant car service, in the interests of passengers of more limited means, and have been advertising cheap and attractive meals of two or three courses only. The same practice is now spreading; *table d'hôte* meals are becoming the rule, and the specialised *à la carte* dishes of the past are being served only " when opportunity offers "; while many cars are being re-seated with 48 places in place of the previous 36 seats.

Broken Wire Locks in India

A note in the Indian *Quarterly Technical Bulletin* for October, 1942, by Mr. H. E. Cox, Deputy Chief Engineer, Signals, G.I.P.R., gives some interesting particulars concerning improvements introduced in broken wire locks applied to point mechanisms operated on the double wire system, of which there are now a considerable number in India. Some difficulties were experienced with the first form of lock used in India and the first form of German (Prussian) standard was then adopted, but some of the incidents to which it proved to give rise in Germany were experienced in India, and a new standard point drive—actually a design long known—was decided on by the Germans to obtain more regular operation. Some double wire installations were laid down on the East Indian Railway embodying German mechanisms with spring-loaded lock pawls projecting from the rope wheel and engaging with stops inside it; the last " pull " wire was arranged to stand clear of the wheel at the completion of the movement. This equipment proved very satisfactory and was adopted for work installed on the Great Indian Peninsula Railway. It proved necessary, however, to have the spring ends made into lugs and clearances arranged between the lugs and the lower lug and wheel web. The pawls are grease lubricated.

U.S.A. Locomotive Manufacture

Not so very long ago the figures for locomotive production by American manufacturers seemed to suggest that the days of steam were nearing an end; deliveries were almost exclusively of diesel units. However, the period was one of retrenchment and instead of buying equipment to meet more business, the railways were buying equipment that would show operating economies during lean years. Now that wartime traffics have led to a boom in transport there has been a sharp revival in steam locomotive building. Diesels are still being bought to perform yard work, a duty for which they are pre-eminently suited, but this buying is now as much with the intention of releasing useful steam locomotives as for the achievement of operating economies. Extra locomotive power is urgently wanted and diesels of 600 or 1,000 h.p. can replace steam units capable of exerting 1,500 h.p. and more when running at the speeds needed for main-line train haulage. During last February, 61 diesel electric, 170 steam, and 6 electric locomotives were placed in service. Orders still outstanding at the end of February included 707 diesel electric, 1,303 steam, and 50 electric locomotives. The oil supply situation may have affected the picture a little but it is worth remarking that some of the most recently built steam locomotive are oil burners.

Indian Locomotive Livery

Through the courtesy of the Chief Mechanical Engineer, North Western Railway of India, our correspondent in Lahore informs us that one of the 28 " XC " Pacific locomotives on that railway is being turned out in a livery of light Indian red. This innovation is in the nature of a trial to encourage shed staff to take more pride in the engines. If it proves a success, more of these engines may be treated similarly, and the coloured livery may become standard on the North Western Railway. The colour adopted is the same as that of the coaching stock. This is not the first " XC " to be so treated, for one of the first two received in 1928 was turned out in L.M.S.R. livery when placed on exhibition in Lahore and Delhi; but that engine was later repainted black. Three years ago the passenger engines of the Jodhpur Railway were turned out in G.W.R. green livery and they still retain this colour.

British Railways in Wartime

PHENOMENAL success has attended the publication by His Majesty's Stationery Office of the various pictorial booklets depicting some aspect of war activity, and has clearly indicated that the terse and vivid text, profusely illustrated, exactly meets the current desires of a busily-engaged public. This series of official booklets has paid its tribute to transport in general by the inclusion of " Transport goes to War," which was issued for the Ministry of War Transport by the Ministry of Information, and is described as the official story of British transport, 1939-1942. Its scope was wide, and the textual treatment laid natural emphasis upon personal fortitude and heroism in the maintenance of essential lines of communication in difficult circumstances.

It was felt by the British railways, therefore, that there was still room for a companion publication devoted exclusively to the achievements of the railways as such, and the Publicity Committee of the Railway Executive Committee, has adopted the happy idea of producing such a book under railway auspices. It is, in fact, an illustrated version of the " Facts about British Railways in Wartime "* which is issued annually by the British Railways Press Office. The same title is used, and " Facts about British Railways in Wartime, 1943 " has just been published as a 1s. book, profusely illustrated. In view of the requirements of censorship, it was not to be expected that important new facts would be revealed, and the essential information contained in the text has already been published from week to week in our regular feature " Transport Services and the War." Moreover, the illustrations are mostly familiar to our readers. The attraction of the book is that it is a collation of information and pictures which elsewhere must be sought over a period now of approaching four years, presented in highly attractive form, with technical accuracy, but in such a popular way as to deserve ready appreciation from the general public.

British railways are justly proud of their war record. They have tackled, and are tackling, the biggest job in transport history. However great the pressure—and at times it has been particularly acute—they have never let the nation down, and it yet remains for the return of peace to justify the revelation of sufficient facts to enable the strength and magnitude of the united railway war effort to be appreciated fully. In fact, so smoothly have railway transport services been provided that they are apt to be taken for granted, and not the least value of this booklet is its emphasis on the extensive and important schemes which the British railways effected during the two decades which ended abruptly in September, 1939. During the ten years immediately before the outbreak of this war, the main-line railways and London Transport expended the enormous sum of £314,600,000 upon improvement works, despite several years of trade depression, and it can be claimed fairly that their farsighted activities, under private ownership and managed by private enterprise, placed at the disposal of the country on the outbreak of war an organisation, fully equipped and perfected by long term research, which was capable of meeting the full impact of the transport needs of a nation at war.

All kinds of familiar, and some unfamiliar, aspects of railway working find their representation within the pages of this booklet. It covers successively operating control, inter-company conferences, regulated traffic movements, and central wagon control. The many ways in which the railways have sponsored the more intensive and most economic user of available facilities is indicated by such headings as the quicker turn-round of wagons, travel restrictions, staggering of working hours, and salvage and economy. The incidence of war-like operations is represented by the references to air raid precautions, air raid damage and rapid repairs, and awards for gallantry, but these are not disproportionate, and the key-note of the book is the presentation of sober fact, requiring no dramatisation, but carrying its own conviction, with pictorial aid, by reason of the magnitude and variety of the tasks successfully achieved.

For the small boy, who is less interested to know what is done than what does it, there are details of railway equipment, such as special wagons for very large loads—guns, aircraft, and tanks (the largest wagon in Britain has 56 wheels and can carry a load of 150 tons); docks, tracks, signals. There are action pictures of the most powerful types of express-passenger and heavy-freight locomotives on each railway; their dimensions and capacities are compared. At the end of the booklet come four pages of " Facts in Brief," covering such particulars as the longest bridge, the busiest junction, the longest tunnel, the longest stretch of straight track, the largest and smallest stations, and speed records. The chapter entitled " Train 300 " takes

* See Publications Received, page 554

the reader behind the scenes to describe one of many thousands of journeys which are absolutely necessary just now—a typical journey made by a special troop train. "Intimation is received at Traffic Headquarters, by despatch rider or by telephone, that 27 officers, 390 other ranks, together with 10 tons of equipment, must be moved from Campten to Blueport, and that the train must reach its destination by 6 a.m. on the day after tomorrow." Portions of line belonging to three railways will be used. The path of the train is plotted. Halts are planned. Control offices, station staff, and signalmen are advised, but very few of the railway staff know the particular kind of the train and its destination. Train 300, from start to finish, follows a carefully plotted course during every minute of its journey, and the result is a masterpiece of dovetailing by staff and equipment.

The Steel Rail Problem

FROM the paper recently read before the London Section of the Permanent Way Institution by Mr. Cecil J. Allen on "The Steel Rail, Past, Present, and Future," which is reported on page 557, the main conclusion to be drawn is that the rail has never yet had the benefit of the systematic research towards a better-wearing quality deserved by a detail of railway equipment on which millions of money, in the aggregate, are spent annually. He pointed out that Great Britain is not alone in this matter. In the United States it needed 20 years' experience of the transverse fissure defect, and its destructive possibilities, before an inter-railway rail committee was at last set up, in 1931, to go into the whole problem on an adequate research basis—a committee which has now become permanent, with greatly extended terms of reference. On the continent of Europe, two years earlier, the First International Rail Congress had been held, and at this and subsequent congresses in 1932 and 1935 large numbers of railway and manufacturing experts met from many countries, with one notable exception—Great Britain—which was not represented until ultimately in 1938, the Engineer of the Southern Area, L.N.E.R., sent a representative to contribute to the Fourth International Rail Congress a description of recent steel rail progress in Great Britain. In this country, in the period from 1890 to 1910, there had been plenty of experience concerning the value of manganese in rail steel, but whether the inclusion of from 1·0 to 1·28 per cent. manganese in the rail of those days had been made by rule of thumb or by more soundly-based theory, the fact remains that the B.S. rail specifications of 1906 and 1922 cut the maximum of that element down finally to 0·80 per cent. in order that the carbon might be raised.

Although British railways have not suffered from the transverse fissure, because their high carbon trend has never gone to such extremes as the American, they probably have suffered from the use of some 2,500,000 tons of rails of wearing quality inferior to that of the steel rails of earlier years, and the decline, in Mr. Allen's judgment, need never have taken place had the railways combined in rail research in order to lay a solid metallurgical foundation for their rail policy. It was not until the lead taken by the L.N.E.R. in 1929 to 1931, in breaking away from the higher carbon composition, had been followed by the B.S. rail specification revision of 1935, that the earlier position was restored. The paper was thus a strong plea for more concerted action by the railways in the direction of a scientific approach to the rail problem—not as one item in the programme of a general research department, but by an inter-railway committee of experts able to give adequate time to the work. The author laid stress on the fact that there is no universal panacea for all the ills to which the rail is heir, and that in the past wrong conclusions have at times been reached in track trials of special steels because there has not been sufficient study of the conditions in which the rails have been laid; in this connection he suggested that different types of rail steel might well be used to oppose the maximum of resistance to rolling abrasion, grinding on curves, and corrosion respectively.

Another point urged was that in any improvement of the rail the fullest co-operation of the manufacturers should be sought, and that attention should be paid to their point of view as well as to that of the railways, with both sides sharing in the losses as well as the gains involved in rail experimentation. The speaker gave as an admirable example of such co-operation the medium manganese revision of 1931, in which there was material benefit to both sides by a carefully-thought out improvement, so that the change could be negotiated without any increase of cost to the user. Equally he considered that railways should pool their knowledge in regard to rail failures, with a view to positive action to reduce the incidence of specific defects that cause premature removal of rails from the track. As regards the future, the speaker gave it as his opinion that the possibilities offered by suitable variations of rail analysis and by further development of the Sandberg sorbitic treatment are as yet largely unexploited. Some idea of the extent of this unexplored field is given by recent experiments, in which, without costly ingredients, the breaking strength of steel extending to a depth of $\frac{5}{8}$ in. below the running surface of the rail has been lifted to between 70 and over 78 tons per sq. in., while elongations of 12 to 13 per cent., and reductions of area of over 33 per cent., offer evidence of well-maintained ductility; considerable punishment has also been sustained by these rails at the falling weight test without fracture. The strongest point that Mr. Allen made was that the railways should not be content merely to shelter themselves behind standard rail specifications, and to maintain an unchanging rail quality which is being outstripped constantly by the increasing severity of the traffic conditions that the rails must withstand.

King Charles I and Railway Nationalisation

ANY change in the existing state of affairs concerning British railways, and necessitating the attention of Parliament being directed to their existence, invariably brings forth the advocacy of some form of "nationalisation" involving State purchase (although not necessarily operation) of the lines. More than 300 years have passed since what may be regarded as the first railway nationalisation proposal was presented to King Charles I on July 10, 1628 (see the Stowe manuscripts). The project was for making the King "the sole merchant of the Coales" and the scheme proposed, *inter alia*:—

> (1) By makinge compitent passages for the waters, that anoye the mynors, or pyonors by makinge one Portable Ryver, from those parts, where the Coales are to be acquired; by makinge Highwaies passable, and reformed Cariages, to convey the Coales to that Ryver. . . .

The proposal was for the Crown to take possession of all the coal mines within the Bishopric of Durham "Uppon remoove of that Bishop" and to develop these mines as a royal enterprise. The "reformed Cariages" were the flanged-wheel vehicles to run on the short, but important, mineral railways (or wagonways) serving the coalfields. It is scarcely necessary to say that this early suggestion of coal and railway nationalisation did not proceed further, and mining railways, which had been introduced into some of the coalfields a quarter of a century earlier, were not developed substantially until after the Restoration which followed the Commonwealth. Exactly 100 years ago, however, at the beginning of the Railway Mania period, the Parliament of that time, being of opinion that it might be advisable at some future date for the State to acquire the railways, gave expression to that opinion by means of the passage of the Cheap Trains Act (7 & 8 Vic. cap. 85) on August 9, 1844. This Act was passed for the purpose "of attaching certain conditions to the construction of future railways authorised or to be authorised by any Act of the present or succeeding sessions of Parliament." It thus excluded some 2,320 miles of railways, many of them trunk lines of importance, which had been authorised up to that time. These are shown in the map we reproduce at page 567.

The legislators of 1844 declined to express any view as to the expediency of State purchase, which they held should remain for the future consideration of the legislature on grounds of general and national policy, but the Act did specify the basis of the purchase consideration, should such a policy be adopted. This Act, although generally regarded as a dead letter, has not been repealed. Broadly, the Act recognised that 25 years' purchase of a net revenue sufficient to pay 10 per cent. upon the capital stock was a fair price to offer for a line of railway. In fact, the 25 years' purchase of the annual net revenue for those railways which, during the three years preceding purchase were earning 10 per cent. or more upon their capital, was specified as the consideration. Where a railway had a three-year average of less than 10 per cent., and the company was of opinion that a figure based on the actual average profits was inadequate in view of prospects, arrangements were made for arbitration concerning what additional amount of purchase money should be paid to such a company, and it is a reasonable assumption that, had the provisions of the Act been put into force at that time, the arbitrator would have awarded at least a 10 per cent. standard. It is highly improbable that the provisions of the 1844 Act will ever be put into effect, or that such a course would be advocated now even by the keenest supporter of State ownership and State trading. The financial clauses are, nevertheless, of considerable interest as indicating what Parliament in its considered wisdom *once* accepted as the cash value of railways.

L.N.E.R. Assistant General Manager

WE feel that we are expressing not only our own views, but also those of all the directors and officers, and a very large number of the staff of the London & North Eastern Railway, when we say that one of the few pleasant features of the war has been that it caused the postponement of Mr. R. Bell's retirement for about three and a half years. Elsewhere in this issue we publish his portrait and a record of his railway career. Early in 1922 he was appointed Assistant General Manager of the North Eastern Railway, and on the formation of the London & North Eastern Railway, as a result of the Railways Act of 1921, he was appointed Assistant General Manager. Only one other Headquarters Officer has occupied the same position for the whole of this period. But for the war, he would have retired in November, 1939, on reaching the age of 65.

Up to 1908, when the days of railway competition were nearing their end, from April to August one was more likely to find a railway general manager attending a Lords or a Commons Private Bill Committee, than in his office. The detail managing of the railway largely fell to the Assistant General Manager, or on some lines to the Chief Goods Manager. Since then conditions have changed, not necessarily for the better. The Parliamentary Committee rooms are empty, and the wealth of the Parliamentary Bar has dispersed. But in the place of the Private Bill Committee season have come Railway Commissions, Public Inquiries, Inquiries into Overseas Railways, the Rail & Road Conference, the Railway Rates Inquiry, the Railway Rates Tribunal, the Railway Staff Conference, the Railway Staff National Tribunal, and last but not least, the Railway Executive Committee, all of which have taken away General Managers from their real job of managing the railways. Thus, an organisation which provides for an Assistant General Manager who shall be always available for consultation, or to say "yes" or "no" in the absence of the Chief, is most necessary for the efficient running of a great organisation such as the London & North Eastern Railway.

Mr. Bell has a strong personality; more than most he deserves Kipling's description of the man who is "adequate." No matter what problems were presented to him—and these were varied and fundamental during the 20 years' life of the L.N.E.R.—his handling was always adequate. There was never any strain, he was never loud-voiced. He never blustered and never lost his head. He was always incisive, direct, and lucid. He could listen, and with unfailing insight grasp the essential points in a mass of detail, and could give a direct judgment on the essentials. If he were consulted on a dozen different subjects one after the other, his facile mind dealt adequately with each. He could say more in a few words and express more in a short letter than most men in a long speech or a lengthy memorandum. One recalls the well-known lines of Andrew Marvell's Horatian ode: "He nothing common did or mean Upon that memorable scene." This phrase could very aptly be applied to Mr. Bell with, however, a considerable amplification. The poet's hero is commended for his action on a specific occasion when the mind was exalted to higher issues. How infinitely harder to maintain a standard from which one does not deviate during the long period of 20 years. Throughout this long period he maintained a high level of thought and speech and never lowered the flag of good taste.

One of Mr. Bell's characteristics was his interest in younger men and their future. It may very well be that this continued absorption has enabled him to retain his own mental youth. The London & North Eastern Traffic Apprentice Scheme is too well known to need description here. In these days, when so much stress is being rightly laid on schemes of education of all types and for all people, it is well to remember that this pioneer work was introduced on the North Eastern Railway as far back as 1907, and was carried forward as an integral part of the L.N.E.R. organisation. Mr. Bell's name will be indissolubly linked with this scheme which will provide potential officers for the London & North Eastern Railway Company for many years to come. In pre-amalgamation days the railway companies depended on the staff "throwing up" its own officers. Various changes rather detracted from the value of this somewhat empirical method and the Traffic Apprentice Scheme is designed to select in advance those who will benefit from an intensive training rather than to leave chance and accident to have unregulated sway. These traffic apprentices were recruited 50 per cent. from the staff by examination and 50 per cent. direct from the universities or schools. Practically all the younger traffic apprentices are in the services—most of them in some form of transport organisation—and every theatre of war has some L.N.E.R. traffic apprentices chosen to fill positions of responsibility; this is a tribute to the excellence of the judgment of those who selected them. Few headquarters officers had such an intimate personal knowledge of so many members of the staff. At any moment he could speak as to the personal and business qualifications of young men scattered all over England and Scotland. He had an amazing and disconcerting memory and had a marvellous gift of appraising young men. Most of us can form an opinion about someone else after years of knowledge, but it is given to few to detect the potentialities of young men straight from a railway booking or goods office or from university or school, when their minds are not quite attuned to the rigours of an interview and when the interviewer rather than the interviewed has to evoke the correct "responses."

Over a long period Mr. Bell gave annual lectures on the railway position for the previous year, and these were eagerly awaited; if published they would give an excellent consecutive history from the point of view of a participant and an observer. His lectures were always illustrated by comparisons of foreign and American railway conditions and thus gave a comprehensive survey of railway progress as well as illustrating the catholicity of his mind. He had an unfailing intellectual zest and was as mentally young as those of many fewer years. The spirit of physical adventure is probably more alive today than ever before but the vivid clearness of Mr. Bell's mind, his willingness to take mental risks, rather indicates that mental adventure is not the prerogative of the young. As a conversationalist he was invariably stimulating and his recollections of the giants of earlier days were a sheer delight. His interest never flagged. The morning letters were always an adventure to him and he read them with an almost gleeful anticipation. He has said more than once that if he again had the chance to choose his profession he would not change from railway administration, which he always maintained gave a fuller life and wider scope than law, medicine, or the church. His was emphatically the administrative mind at its best: it had a mastery over details, combined with an additional almost uncanny sense of foretelling the results of decisions. The many who read his lectures realise how he always related present-day trade and economic movements to those first principles which we can ignore only at our own peril. His knowledge of history and literature is very wide and his informal lectures delivered without notes are a source of joy to those who have the privilege of hearing them. He is a lover of the open air and of walking, like the great Sir Walter whose sanity and generous humanity he so much admires. We wish him many years among the books he loves and the country lanes in which he delights.

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Great Southern Railways' Critical Position

THE very serious financial position of the Great Southern Railways Company was referred to by Mr. Lemass, the Eire Minister for Industry & Commerce, in a debate in the Dail recently. He said that the present position of the company was such that any measure to remedy it would be beyond the capacity of private industrial enterprise, and, indeed, it was doubtful if these measures could be initiated by national enterprise either. If the company was to survive, there would have to be a vast reorganisation and a complete modernisation of its equipment, and methods of working. The capital invested was already in large measure lost, and in the circumstances private enterprise would not provide the great sum required for the reorganisation and new equipment which the Government had in mind. Employees of the company should recognise that the organisation on which they were dependent for a livelihood was in jeopardy and could not be carried on indefinitely at a loss. The expected revenue for the present year would not meet working expenses. At the annual meeting of the Great Southern Railways Company, reported in our March 19 issue, an indication was given of impending reorganisation and capital reconstruction.

At the close of his address on that occasion, Mr. A. P. Reynolds, the Chairman, said that there was no option but to increase rail rates and charges, and that the company was seeking from the responsible Minister an Emergency Powers Order to increase substantially rates and fares. This Order, entitled Emergency Powers (Increase and Cancellation of Exceptional Rates of Great Southern Railways) Order, 1943, has been issued under date May 27, and is to take effect in one month. Undertakings affected by these changes, however, may appeal against them to the Railway Tribunal within thirty days of notice of the changes being given by the company. In a press interview Mr. Reynolds has stated that the wages bill for 1943 will show an increase of £450,000 above that for 1939, and that the corresponding increase in fuel costs alone will be £600,000. He points out that under the Order only rates below the standard can be increased. As the company carries some 80 per cent. of its traffic at rates substantially less than the maxima, traders can hardly be expected to find much consolation in this restriction.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

No War Bonus for Senior Railway Officials

London, S.W.6. May 26

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I write to seek enlightenment as to the authority which apparently permits a handful of bureaucrats to impose what might be called a means test on railwaymen, thereby upsetting the democratic principles of income tax, which are so wisely designed to encompass all from the richest to the poorest.

Yours faithfully,

DEMOCRAT

Charles Dickens and Signal Lights

Bordyke, Burgess Hill,
Sussex. May 31

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Mr. Grantham, in your issue of 28th instant, has raised a point that is likely to perplex those used to present-day railway signalling. In 1864/5, when "Our Mutual Friend" was written, although the basal theory of the block system remains unaltered, its application was in its early stages.

Usually there was a distant (or auxiliary) signal and a lofty home signal post, at the top of which were two semaphore arms, on one side for the up line and on the other for the down. This signal post was usually at the end of the up or down station platform according to which position gave the engine drivers the better view. Therefore, depending on the position of the signal post, either up or down trains would over-run the signal, even when stopping at the station.

Dickens was correct in both his references. In the first quotation the change from green to red was made because the train had arrived, and the home signal light, turned from green to red, so fulfilled its object as a danger signal to a train following the one in the station. As the train would not stop long "they had to run for it." The signal was not a starting signal for the train.

Mr. Grantham's quotations are correct. The second may refer to a train not stopping at a station, when the signal may have been put to danger, as the train ran through; this question would have been more precise if Dickens had written "as the train passed" instead of "when they prepared to let the lady pass"—but not so romantic!

The type of signal described in "Our Mutual Friend" was in operation on the L.C. & D.R. at Margate Station (and doubtless at many other stations) up to about 1880. There was no signal box, but a small wooden hut containing the signal telegraph instruments, adjoining the home signal post at the departure end of the down platform. When a train arrived, the man whose duty it was, pulled a lever which put the distant to danger, and then actuated the lever on the signal post, and put the "home" to danger.

Dickens was in the continental train concerned in the terrible accident at Staplehurst, S.E.R., in June, 1865, but beyond shock was uninjured. He helped in the rescue of passengers who were less fortunate.

Yours faithfully,

G. A. SEKON

Spanish Locomotives

66, Eton Rise,
Haverstock Hill, N.W.3. May 17

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I have just seen the article on Spanish locomotives in *The Railway Gazette* of April 30 which is interesting. I, however, think your attention should be drawn to the fact that the initial 4-8-0 type 3-cylinder engine was built and designed by the Yorkshire Engine Co. Ltd., Sheffield, I believe for Babcock & Wilcox, and not built by that firm in Spain as indicated by the article. Mr. H. A. Akroyd was chief of the design and technical office of the Yorkshire Engine Co. Ltd. at the time and a first rate locomotive man. The engine was interesting in several ways and included a special form of superheater of Babcock & Wilcox design. The valve motion was also of the conjugated type for operating the valve for the centre engine. The firebox was of the "Orleans" type. The illustration of the engine, p. 437, is I feel sure the British-built locomotive, as it seems exactly like the reproduction which appeared in *The Engineer* of February 3, 1922, to which I would refer you for a complete description, supported by drawings.

Yours sincerely,

E. C. POULTNEY

Publications Received

The A.B.C. of Southern Locomotives.—Compiled by I. Allen and obtainable from him at 225-7, Laleham Road, Staines. 6 in. × 4 in. 40 pp. Price 1s. 6d.—This booklet is an enlarged edition of the publication which was reviewed on page 62 of our issue for January 15. Illustrations have been added to show the appearance of the different locomotive types, and our criticism of the table that seemed to attribute the Stroudley "Terriers" to Marsh has been met by the addition of footnotes giving the original building dates and the designers for all engines that, due to rebuilding, are classed as the more recent work of a later designer. In its present form Mr. Allen's little book satisfies all the ordinary requirements of Southern locomotive enthusiasts and deserves wide popularity.

Facts about British Railways in Wartime, 1943. Issued by the British Railways Press Office, c/o The Southern Railway, Waterloo Station, S.E.1. 9 in. × 7 in. 64 pp. Price 1s. net.—This year the annual publication entitled "Facts about British Railways" has been produced in enlarged and illustrated form on the lines adopted by the publications of His Majesty's Stationery Office for the series of booklets describing various features of wartime operations. The designers of this booklet wisely have not attempted to compress into 64 pages the whole story of railway war achievements. The contents of the booklet, therefore, offer a selection of items on the subject of rail transport in war, illustrated with 53 pictures. Under the heading "Operation" details are given of the systems of control on each line and between one line and another; the Central Wagon Control, which reduces to a minimum the running of empty trains; how a quicker turn-round of wagons is achieved; and the staggering of working hours. There are short chapters on improvement schemes necessitated by the growth of war production and the dispersal of industry, food trains, fuel trains, ambulance trains; salvage and economy. We refer further to this in an editorial article, page 551, and on pages 561 and 562 we reproduce a selection of the illustrations given in the booklet.

Gas Welding of Copper.—A memorandum entitled "Technique for the Gas Welding of Copper" has been prepared by the Welding Research Council and is obtainable from the Institute of Welding at 2, Buckingham Palace Gardens, London, S.W.1. The price is 2s. 6d. post free. Sections are devoted to the properties of copper affecting welding technique, the preparation of edges and setting-up, the flux, the welding flame, and manipulation generally.

Magnetic Skimmer.—From Philips Lamps Limited we have received a leaflet which describes a simple and handy device for removing filings, turnings, and chippings of iron or steel from cutting and cooling fluids used in the machine shop. A permanent magnet in the form of a rod is provided with a handle at one end; its surface is covered by a tubular sheath of non-ferrous material which can be removed at will by sliding it lengthwise away from the handle. The skimmer is used with the sheath in position. To free it of the collected particles the sheath is removed from the magnet. A flange or shield at the open end of the sheath prevents the particles from jumping to the magnet as the latter becomes exposed; they continue adhering to the sheath until the magnet has been completely withdrawn and then they drop off, leaving the sheath perfectly clean and ready for pulling over the magnet again. The skimmer can be used to pick up filings from a bench or floor as well as from a tank or trough containing fluids. The standard length overall is 14 in., but sizes up to 21 in. can be supplied. The diameter is $1\frac{7}{8}$ in. The magnet surface is protected against damp or other injurious influences by a fixed tubular covering.

Increasing the Life and Efficiency of Cutting Tools.—Leaflet M.T.C. No. 9, issued by the Machine Tool Control provides concise information on the correct use and care of hobs, milling cutters, broaches, gear-shaper cutters, and tungsten-carbide tools. Particular importance is attached to the method of resharpening; faults in procedure are illustrated. Correctly formed tools enable production to be speeded up; also they perform more work before needing to be reground. Copies of the leaflet and further advice on cutting tool problems can be obtained from the Controller of Jigs, Tools & Gauges, at 35, Old Queen Street, London, S.W.1.

Sifbronzing or Brazing.—From Suffolk Iron Foundry (1920) Limited, we have received a leaflet describing processes for joint making and for building up worn or undersized parts. The processes are of great practical value and are extensively used in reconditioning parts of motor vehicles and other engineering equipment when replacements are in short supply. The reference number of the leaflet is 11543.

The Scrap Heap

Southern Railway Home Guards have their first heavy anti-aircraft unit—a troop attached to a Hampshire battery.

* * *

New Gold Rush

The production of holes for posts along the Alaska Highway has taken a big jump. A work gang picking at the icy ground recently discovered gold in the hole they were digging for a post—and now it seems they just cannot hold the road diggers!—*From "Canada's Weekly."*

* * *

Bishop's Cheap Travel

The Bishop of London (Dr. Fisher), lecturing on honesty and morality at Queen's College, London, recently, said :—

"I often take a third class ticket in the hope that there will be no third class seats, and if there are not I travel first. I always pay the difference if asked. I am not quite sure if there is any moral obligation to pay it."

* * *

Fluorescence in Railway Service

Even the blackout has its uses for the purpose of display, as has been discovered by the Pennsylvania Railroad. In the city of New York, although the blackout conditions do not approach in severity those to which we are now accustomed in this country, there has been a good deal of dimming of the spectacular electric lighting in which New Yorkers were wont to revel, and in this dimming, of course, the railways have played their part. The Pennsylvania Company has seized the opportunity jointly presented by this dim illumination and modern developments in fluorescent lighting to do some patriotic advertising of an arresting description. In the passenger concourse of the great Pennsylvania station in New York an American flag 60 ft. in length has been mounted ; it is composed of material which has been impregnated with fluorescent substances. On ledges on the opposite side of the area in which the flag is hung there have been installed twelve concealed sources of the invisible "black" light that activates these substances, and produces the fluorescence. The flag, which weighs 200 lb., is visible as far away as the Seventh Avenue entrance to the station. "Few theatres which strive for striking effects by the use of lights," comments our contemporary the *Railway Age*, "have ever achieved anything more dramatic than this Pennsylvania station display." The scheme was suggested by Mr. Raymond Loewy, industrial designer and consultant to the Pennsylvania.

* * *

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As an example of some of the wartime difficulties with which we have to contend the above heading may be cited. It appeared on a proof returned from our printers to us, and should have read: Fluorescence in Railway Service.

* * *

The sum of £2,304 has been distributed during the last year from the L.N.E.R. Cowlairs Works & District Charitable Fund to hospitals and associations in Glasgow and neighbourhood. This figure represents an increase of £103 over the previous year's total. The allocation of the money was as follows : Glasgow Royal, Western, Victoria, and Eye Infirmaries, £1,637 ; other hospitals, £392 ; and nursing associations, clinics, and homes, £275.

* * *

Railway Speed

The returns given in the report of the officers of the Railway Department, Board of Trade, show the average speed upon the various lines, exclusive of stoppage, as follows :—London and Birmingham, 27 miles per hour ; Great Western, 33 ; Northern and Eastern, 36 ; North Midland, 29 ; Midland Counties, 28 ; Birmingham and Derby, 29 ; Manchester and Birmingham, 25 ; Newcastle and North Shields, 30 ; and Chester and Birkenhead, 28. The average speed on the metropolitan lines, exclusive of stoppage, is about 22 miles an hour.—*From "The Times" of* 1843.

* * *

The prompt issue of ration books marked the first day of distribution to thousands of Canadian National Railways employees in the Montreal area. This was made possible through the work of a voluntary clerical staff under Mr. A. W. Kerr, Chief of the Bureau of Statistics. There are approximately 11,000 employees of the C.N.R. in the Montreal area ; on the basis of an average of three books to each adult employee, provision has been made for a minimum distribution through the railway offices of 33,000 ration books, thus relieving public distribution-offices of a substantial task of delivery.

* * *

An Ancillary Business

Two young railway locomotive firemen who stole so much from the L.M.S.R. that they "set up in business" to dispose of the goods were each sent to penal servitude for three years at the Old Bailey recently. The police said that neither of the men had committed any crime before. Both pleaded guilty to stealing eight-and-a-half dozen pairs of stockings and other articles in transit and asked that 57 cases should be taken into consideration. Mr. Vernon Gattie, prosecuting, said that they started their business last October taking parcels they stole to a hut on an allotment near Willesden. "The business grew so much," went on Mr. Gattie, "that they bought a lorry, which they used to transport the goods they stole, and also hired a garage. They also had an elaborate system of agents who were employed to dispose of the goods." The total value of the stolen articles in the indictment was £365, and altogether the value of the goods traced as having been stolen by them was £1,700.—*From "The Star."*

* * *

An Advertising Lament

In pre-war days, before the stress of battle
Forbade us advertising men to prattle,
Bold could we sing, and loud extol our wares;
Praise rail's celerity, and cry its bargain fares;
Whet public interest, in our witching way
With well-told tales of wondrous holiday
And give our story, in a thousand versions
Of cheap and plentiful half-day excursions.

By handbook, bill, and press we told our tale
Inducing sceptic man to go by rail
Emblazoned hoardings, wondrous works of art
With telling message played a giant's part
We boomed hotels, and advertised with streamers
Those week-end trips aboard the company's steamers
Proudly we featured "ads" so bold and strong
Of our fast sailings to the continent.

But now alas! ah, gall and wormwood bitter!
Our crowings are become a feeble twitter
Our policy, because of war's incursion
Has strangely changed, and undergone inversion.
Shame-faced and stern, our posters microscopic
Revolve around a single, gloomy topic,
And bid each man, in terms reverse of merry,
Think if his journey's really necessary.

No longer catering for that urge to roam
The railways counsel "Holidays at Home"
And proud, in deference to a warring nation,
We follow policies of ad—negation.
The spring song in our throats is dead, still-born
Waiting our post-war chance—our golden morn
But strangest yet—despite our advertising
Ironically the rail receipts are rising!

J. D. WRIGHT

". . . and in any case, no smoking!"

[Reproduced by permission of the proprietors of "Punch"

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

WESTERN AUSTRALIA

South Perth Ferry Service

South Perth is situated on the southern side of the Swan River and is separated from the City of Perth by a mile of water. Besides tramway and bus services, this suburb is connected with the city by a ferry service, which is also under the administration of the Commissioner of Railways.

A new ferry boat has been under construction for some time, but, due to the difficulties of obtaining and transporting an engine from England, the completion of the boat has been delayed. It was placed in traffic, however, on November 23. It bears the name *Duchess II*, thus commemorating that of an earlier paddle steamer which operated on this route for many years.

The new boat was designed by Mr. W. H. Taylor, General Manager of the Western Australian Government Tramways, Ferries & Electricity Supply. It has a diesel engine of Ruston-Hornsby design. The boat is of the double-ended type, and has an overall length of 70 ft., a beam of 14 ft., and a moulded depth of 7 ft. 4 in. The total passenger accommodation is for 150 persons, with seating accommodation for 100. A large amount of the gear, such as steering wheels and winches, was made by the department, and the electrical equipment was installed departmentally. The vessel has completed satisfactory trials.

UNITED STATES

B. & O.RR. Locomotive Modernisation

The shortage of motive power, arising out of the curtailment by the War Production Board of locomotive-building orders is being met with energy by various American railway companies in the rebuilding of locomotives on thoroughly-modernised lines. The Baltimore & Ohio Railroad, for example, ordered 23 4-8-2 locomotives from outside builders in 1942, but was permitted by the W.P.B. to take delivery of 9 only. On the Chicago Division this has made it necessary to use 2-8-2 locomotives, built between 1920 and 1923, for the principal freight services; by adding an auxiliary water-tank wagon, it has been possible to increase coal capacity from 17½ to 32 tons, and water capacity from 12,000 to 29,000 gal., so eliminating coal and water stops over the 424 miles between Chicago and New Castle, Pennsylvania. But speed has been limited severely by the driving wheels of these engines being only 5 ft. 4 in. dia. Experimentally, therefore, one of the 2-8-2s built in 1923 recently was modernised by increasing the cylinder diameter from 26 to 26½ in., driving wheels from 5 ft. 4 in. to 5 ft. 10 in. dia., working pressure from 220 to 240 lb. per sq. in. and tractive effort from 63,200 to 65,500 lb. Balancing has been improved, and with various other modifications efficiency and potential speed have been raised substantially. After three more of the same type, built between 1911 and 1913, had been dealt with similarly, a more ambitious programme was decided on, that of converting 20 of the "Q-1aa" type 2-8-2s, built between 1911 and 1913, to the 4-8-2 wheel arrangement, with more extensive modifications; this work is now well under way. The boiler shell is being lengthened and provided with a combustion chamber; a new front cast-steel bed, including cylinders, valve-chests, bumper deck, and airpump brackets (in half the locomotives the entire frame will be cast in one piece) are being provided; other additions include Baker valve-gear, mechanical stoker, feed-water heater, power reversing-gear, oil lubrication to all driving journals, and two cross-compound air compressors. In these engines, the cylinders are being enlarged from 26 in. by 32 in. to 27 in. by 32 in., driving wheels from 5 ft. 4 in. to 5 ft. 10 in. dia., pressure from 190 to 230 lb. per sq. in., and tractive effort from 54,000 to 65,100 lb.; the increased efficiency is measured by the fact that on test the 4-8-2s have shown a reduction in coal consumption for every 1,000 train miles from 78·4 to 65·7 lb., as compared with the original 2-8-2s—an economy of roughly 20 per cent. These conversions are taking place at the B. & O. Mount Clare shops, Baltimore, at the rate of one a month.

Illinois Central Locomotive Building

During this year the Illinois Central System, which hitherto has confined the work in its Paducah (Kentucky) shops to heavy locomotive repairs and rebuilding and modernisation of locomotives (271 such modernisations have been carried out at Paducah since 1926) has embarked for the first time on locomotive construction. The Paducah shops are engaged in turning out heavy 4-8-2 mixed traffic locomotives of the "2600" class, of which the first was put into service on November 24, 1942, and five in all completed by the end of the year. They have 5 ft. 10 in. driving wheels, 28 in. by 30 in. cylinders, 12 in. dia. piston-valves and 275 lb. per sq. in. pressure, giving a tractive effort of 83,160 lb. Each weighs 190 tons in working order, and the 12-wheel tender, accommodating 22,000 gal. of water and 26 tons of coal, of 173 tons makes a total for engine and tender of 363 tons. As is now customary in much American locomotive practice, the locomotive cylinders, valve-chests, smokebox saddle, and frames are cast in one piece, the casting having a total length of 54 ft. Engine and tender measure 105 ft. 1 in. overall. The work on the boilers is being carried out entirely at Paducah, which is provided with a 2,100-ton hydraulic press.

Reducing Railway Indebtedness

American railways have been making the most of their current prosperity in reducing the total of their debts. During 1942, for example, the New York Central System wiped off a total of $54,536,356, which represents 5·55 per cent. of the aggregate indebtedness of that company, and has made possible a reduction of 4·4 per cent. in the yearly interest payable. Another large reduction was that of the Illinois Central System, which succeeded during 1942 in paying off $26,440,833 of its total debt. The Chicago, Burlington & Quincy Railroad has cut its long-term debt down from $251,558,377 to $230,745,758, or by 8·27 per cent., and its interest payments have diminished by 5·69 per cent.; the Bangor & Arostook Railroad has done even better, proportionately, by eliminating 10·02 per cent. from its interest commitments. In all, 35 class 1 railways have managed in a single year to reduce their indebtedness by $300,735,471, which is 3·76 of the total indebtedness of the railways concerned, and the interest charges are down by $11,606,770, or 3·58 per cent. It is almost entirely the long-term indebtedness of the railways which has been dealt with in this way, for, of the total of over $300,000,000 of paid-off debts just mentioned, $297,737,166 represented the long term variety.

ARGENTINA

Reduced Air Tariffs

The Panagra Air Company announces a reduction, amounting on an average to 10 per cent., in the passenger tariffs for the routes between the United States and the Panama Canal zone, Colombia, Ecuador, Peru, Brazil, Bolivia, Chile, and Argentina. It is stated that this reduction has been made possible by more frequent trips, the increased number of passengers, and a higher standard of efficiency in operation. In a press interview on the subject recently, the Chairman of the company, Mr. Harold J. Roig, predicted that, as the result of the improvement in equipment and technical methods which might be expected in the post-war period, the cost of international aviation would be reduced gradually, and that the tariffs for air travel would be lower than those ruling for other forms of transport. In recognition of its achievement in completing 42,964,911 passenger-miles during 1942 without an accident, the International Aviation Safety Award of the Interamerican Safety Council again has been made to the company. The award, which was instituted three years ago, has been won every year by the Panagra Air Company.

State Railways Wages

The administration staff of the Argentine State Railways has addressed a petition to the General Manager for an increase in salaries and wages, asking also that the various deductions to which earnings are subject (apart from pension contributions) be discontinued. The petition points out that for some years earnings have had to support various deductions as a result of measures introduced from time to time to offset losses on working, but that now the financial position has improved considerably, and that profits during 1942 exceeded 30,000,000 pesos (£1,800,000), facts which, it is contended, justify the appeal. It is suggested also that the system of testing an employee's fitness for promotion by examination be abolished, on the grounds that it is absurd to require a member of the staff with over 15 years' service, as has occurred, to pass a theoretical examination in his capacity to carry out his duties. On the other hand, all candidates for employment on the State lines might be required to pass an examination in general knowledge.

MEXICO

Reduced Tourist Travel

Tourist travel into the interior of Mexico reached a low level in December, 1942, with only 126 motorcars passing into Mexico in the first 13 days, and tourist cars passing southward through Nuevo Laredo from the beginning of last year until December 20 were only 13,220, compared with 32,245 in the corresponding period of 1941. Northbound traffic was much heavier, as cars entering the United States from Mexico between January 1 and December 20, 1942, numbered 26,699, compared with 32,523 in the same period of 1941. On the other hand, local touring at border points flourished, and it is believed that at some places tourist activity was greater than a year earlier.

The Steel Rail, Past, Present, and Future

A plea for more adequate research into problems concerning the manufacture and composition of railway rails

AT the Albert Stanley Institute, Hammersmith, on Wednesday evening, April 14, Mr. Cecil J. Allen, of the London & North Eastern Railway, read a paper before the London Section of the Permanent Way Institution on "The Steel Rail, Past, Present, and Future." The author first emphasised the magnitude of the problem, in that even before the war British railways were buying between them annually rails to a total value of two millions sterling, whereas at increased post-war prices the total might well rise to three millions or more. Yet for lack of adequate research on the subject, or a pooling of rail information between the railways, a heavy price had been paid, both in Great Britain and elsewhere.

In the United States, for example, the transverse fissure defect was first brought to light by a derailment on the Lehigh Valley Railroad in 1911. It was in large measure a result of the American policy of raising the carbon content of rail steel, in order to secure great hardness to resist the increasing severity of track conditions, but without adequate regard to other consequences that might ensue. In subsequent years the failure of fissured rails had caused considerable loss of life and material, heavy and constant cost of Sperry *in situ* fissure detection, and premature removal from the road of tens of thousands of affected rails (reaching a peak figure of 19,785 in the year 1940 alone); while at the same time, as in British experience, higher carbon percentages had not increased but had tended to reduce the wearing capacity of the steel. After twenty years a committee was formed in 1931, consisting of railway chief engineers and rail experts and manufacturing representatives (with an executive sub-committee of eight experts only, working in conjunction with a team of research specialists of the University of Illinois) to go into the question of fissures in rails; this committee has now become a permanent body, and its terms of reference have been extended to cover many other rail questions. The author regarded it as a reasonable inference that the formation of such an inter-railway rail committee twenty years or so earlier might have saved American railways millions of dollars of avoidable loss by the initiation of a sounder metallurgical policy than had been followed with rails; and even yet, although a 100 per cent. preventive of fissuring had been found in the Sandberg method of retarded cooling, the loss must still continue by reason of the many millions of tons of rails in American tracks rolled before control of cooling was introduced.

In Great Britain we have had a somewhat similar experience with rails, but fortunately without the same disastrous outcome, as fortunately we have never gone to the same extremes in carbon as have the Americans. Damaging comparisons had often been made between the wearing capacity of rails rolled in recent years, and those produced in the earliest days of steel-making, and the author briefly reviewed the reason for this—in particular the gradual work-hardening in easy traffic conditions which counteracted the embrittling tendencies of early steel compositions high in sulphur and phosphorus, and the unit methods of production, with much work done on the steel at relatively low rolling temperatures, as compared with mass production at higher rolling and finishing temperatures today. The former condition cannot be restored, as steel made to such compositions would not stand up to present-day tests; and restoration of the latter condition might well make the remedy more costly than the disease. But it was also evident that early steel manufacturers knew more than we give them credit for, and that some of our more recent improvements are not so modern after all.

For example, between 1882 and 1897 the G.W.R. was using rails in which the manganese content averaged 1·07 or 1·08 per cent.; and between 1903 and 1911 the Midland Railway was using rails containing 1·00 to 1·28 per cent. of manganese, and had at that time the best reputation in the country for freedom from rail breakage. Yet when the G.W.R. introduced their 97½ lb. rail in 1900, manganese was cut down to an average of 0·80 per cent.; and it was directly in face of all the previous experience that, when the first British standard rail specification was drawn up in 1906, manganese was limited to a maximum of 1·0 per cent., and that in the 1922 revision this maximum was cut further to 0·80 per cent., in order that carbon might be still further raised. The result is that between 1922 and 1935 British railways laid in their tracks about 2,500,000 tons of high carbon—low manganese rails, of a quality ill-fitted to withstand abrasive wear, when combined research at an earlier date might have established on a sound metallurgical basis certain desirable rail characteristics of earlier date, and thus might have prevented the error.

It was the Great Eastern Railway which first rediscovered in Great Britain the virtue of manganese in rails; the L.N.E.R. continued this research, ordered a considerable tonnage of rails of this quality in 1929, determined in 1930 to break away from the B.S. 1922 rail steel composition in favour of medium manganese, and with the Southern Railway standardised the latter quality in 1931. But it was not until 1935 that the revised limits of 0·90 to 1·20 per cent. manganese, with reduced carbon, were admitted to the B.S. rail specification. Thus at last we turned the corner towards a definite improvement in rail quality, and this time on a solid foundation laid with a measure of metallurgical knowledge and consolidated by experience. A further substantial advance had been made, and in this case by the energy of an outside firm of consulting engineers rather than by research initiated either by the railways or the manufacturers, in the introduction of heat treatment by the regulated sorbitic process, which is now in such widespread use, and of controlled cooling.

The next section of the paper was devoted to rail defects. Mr. Allen laid stress on the fact that each railway makes careful records of rail failures and defects, some of which are subjected to careful chemical and metallurgical inquiry, but that here again there is little attempt to pool such information, or to take positive action with a view to reducing the incidence of any particular defect in future. In this connection Mr. Allen mentioned the American custom, arising out of the transverse fissure menace, of publishing annually the total number of failures from the total of rails supplied by each individual mill—a procedure that has no terrors for the best makers, but that acts as a valuable incentive to others to improve their production methods. Of two suggestions at this stage, one was that the practice adopted by certain firms of marking distinctively the top, middle, and bottom rails from each ingot might be made obligatory, so that the railways, if they so desired, could reserve middle and bottom rails for all the most important locations, and also ensure that top rails, from which came most troubles in the track, were kept out of switch and crossing work. The second was that a closer watch than hitherto, by the help of track stress measuring appliances, should be kept on the potential damage to rails resulting from badly balanced locomotives, flats on tyres, excessive slipping or careless braking, resulting in skidding which may damage rails severely by the generation of excessive heat.

Another past failure, Mr. Allen suggested, has been to realise that different factors in reducing rail wear need different remedies; loss of weight by grinding of flanges on curves, for example, differs from loss by the rolling action of wheel-treads and by battering at joints on straight track; and both differ totally from loss by corrosion in a damp tunnel. Hitherto it has often been the practice to try a new rail quality first in some location where loss of weight has been the most rapid, with the result, for example, that an abrasion-resisting steel may have been used where a corrosion-resisting steel was really needed. Faulty conclusions may have been reached in this way as to the merits of some new steel, and some of the inconsistency of rail wear comparisons is thereby explained. The aim in future might be to provide one type of rail, at basis price, for general use; a heat-treated type for all heavily trafficked locations in which normal life is shorter, say, than ten years; possibly a special abrasion-resisting type for use as the high rail on sharp curves, and which might thus be of special value for tube use; and, if a suitable steel can be discovered at a reasonable price, a corrosion-resistant rail for tunnels, water-troughs, and similar locations.

The final conclusions of Mr. Allen's paper were:—(1) That the railways should not be satisfied merely to shelter themselves behind a standard specification, and to go on year by year buying rails of unchanging quality, while the conditions to which those rails are subjected in the track grow progressively more severe. (2) That the magnitude of the rail problem demands research, not as one item in the programme of a general research department, but as a joint concern of all the railways, by a small committee of experts able to give plenty of time to the subject, like the American rail committee mentioned earlier. (3) That the fullest co-operation of the manufacturers be sought in the matter, and that throughout all such research, and any developments to which it may lead, there should be adequate recognition of the manufacturers' point of view. (4) That there should be more pooling between the railways of rail information, and particularly that relating to rail defects, with a view to concerted action, when necessary, to secure reduction in specific types of defect that cause premature removal of rails from the track.

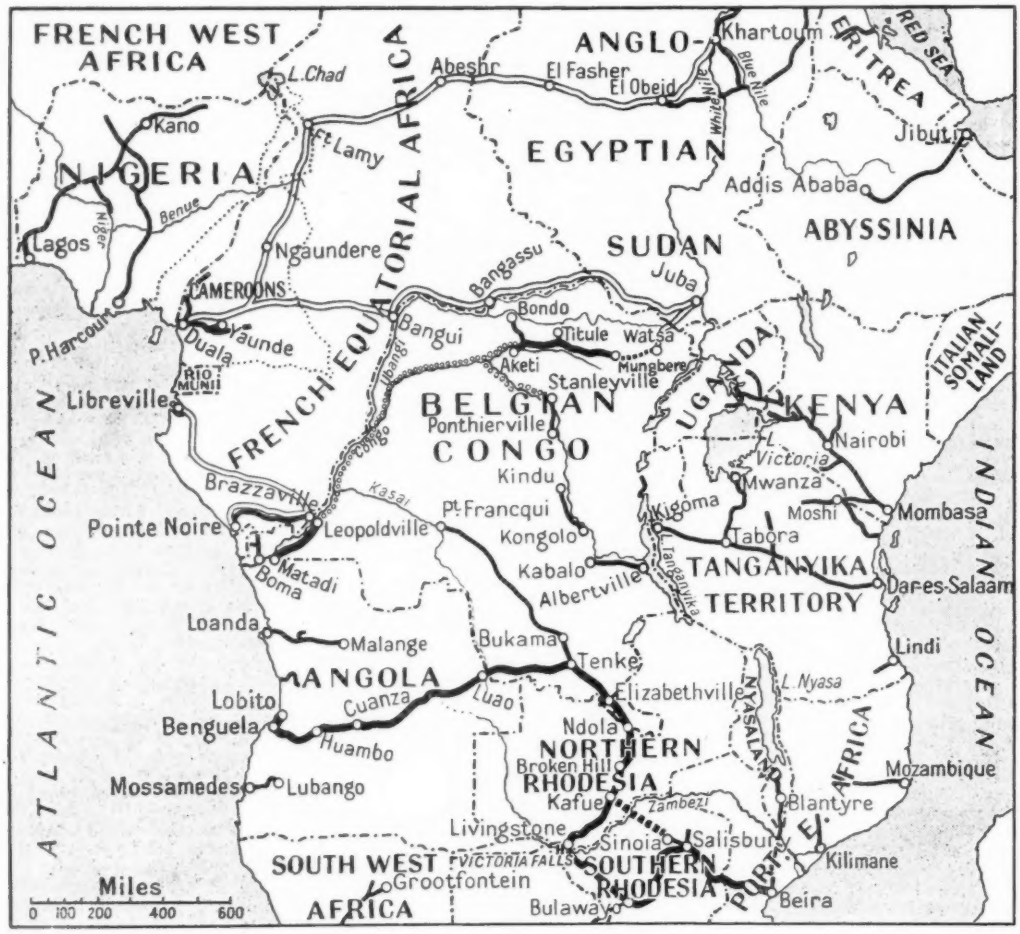
XUM

Trans-African Communications

A chain of sea, rail, river, and road links provides connection between the West Coast of Africa and Egypt

THE dangers to which shipping is liable in wartime have given considerable importance to lines of communication across some of the great land masses of the world, and within the past two or three years extensive developmental works have been undertaken with the object of improving the means of through transport in territories where peacetime progress of this kind would have been slow. Particularly is this the case across the great land mass of Africa, so as to avoid a lengthy sea voyage round the Cape. By the development of such routes it has been found possible to establish routes which are immune from enemy interference and thereby save a considerable tonnage of shipping. To some extent existing routes have been subject to the limitations that they traverse neutral or enemy-controlled territory, and this has limited the use that can be made of the continuous chain of 3 ft. 6 in. gauge lines from Lobito (in Portuguese Angola) on the Atlantic, to Beira on the Indian Ocean, a road distance of 2,926 miles, which was described in our issue of February 27, 1942 (page 303).

Further north, the adherence of French Equatorial Africa to the cause of the United Nations enabled two valuable trans-African highways to be established between Duala (on the West coast) and the Nile Valley in the Anglo-Egyptian Sudan. Some details of these highways were given in our issue of February 27, 1942 (page 314), and August 14, 1942 (page 163).



Outline map of Central Africa, showing Trans-African lines of communication. Roads are indicated with parallel lines, and railways with solid black lines

Between Angola and French Equatorial Africa is the widespread territory of the Belgian Congo, and across this area a useful chain of communications was established, using a combination of rail, water, and road transport. The links are as follow :—

Sea to Matadi,
Rail from Matadi to Léopoldville,
River from Léopoldville to Aketi,
Rail from Aketi to Mungbere,
Road from Mungbere to the Nile.

In the Belgian Congo the rivers form a valuable means of internal communication. The River Congo is navigable for 95 miles from its mouth to Matadi, but then as far as Stanley Pool (Léopoldville) numerous rapids render the river unnavigable. Beyond Léopoldville, however, there are more than 1,000 miles of navigable river, and several of the great tributaries are navigable for a considerable extent of their course.

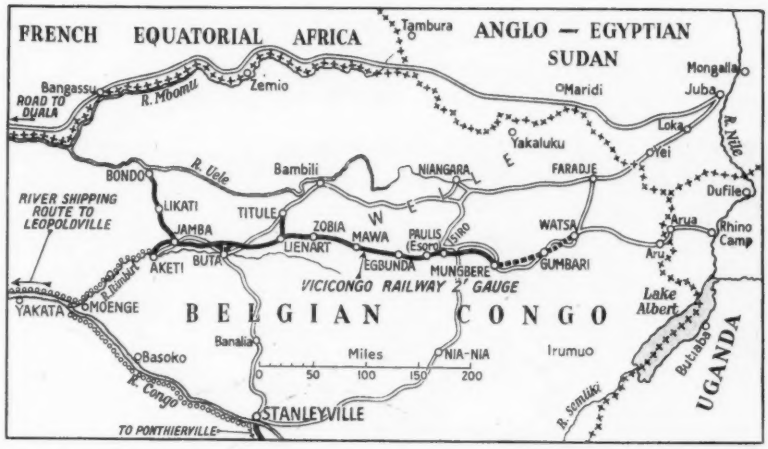
The development of the 227-mile railway from Matadi to Kinshasa and Léopoldville began in 1889 when the Compagnie du Chemin de fer du Congo obtained a concession for 99 years. Many difficulties arose during the period of construction, but the whole line was finally opened to traffic in 1898. The railway was laid to the 2 ft. 6 in. gauge. In 1920, after survey by the Bailleux expedition, a new location with a maximum gradient of 1·7 per cent., and curves with a minimum radius of 200 metres, was decided upon. The new line was laid to the same gauge, but arrangements were made so that it could be converted readily to the 3 ft. 6 in. gauge, which is the standard for the majority of the lines to the south. This conversion was effected in 1930. The Congo Railway Company was placed in liquidation on June 1, 1936, and the working of the Matadi-Léopoldville Railway was assigned by the Belgian Congo Colonial authorities to the "Otraco" (Office d'Exploitation des Transports Coloniaux) formed on April 20, 1935.

The river steamers which operate on the River Congo and its tributaries upwards from Léopoldville are in the hands of various proprietors, but the most important is the Otraco. The fleets of the various operators

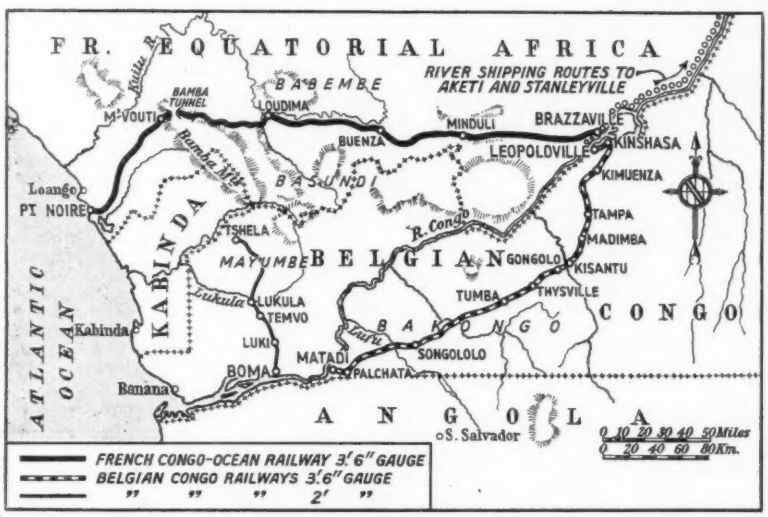
consisted before the war of 1,381 steamers and barges, of a total tonnage of 219,490.

Near Yakata the River Itimbiri continues the course of the Congo in a north-easterly direction; the Congo itself about here turns south-eastward towards Stanleyville. The River Itimbiri is navigable to Aketi, and from here onwards land transport is resumed. Aketi is a base of an interesting railway system called the Vicicongo (Société des Chemin de fer Vicinaux du Congo). This has a total length of approximately 850 km. (530 miles) of 2-ft. gauge line, and it is possible that further extensions have been made recently, but not announced by reason of security considerations. A main line extends from Aketi to Jamba, Lekate, and Bondo, a distance of about 100 miles, but from the point of view of trans-African communications, the more interesting and longer line is the branch which extends from Jamba, through Buta, Paulis (Esoro), to Mungbere,

The Vicinaux Company was incorporated in Brussels in 1924, and acquired the concession for a 2-ft. gauge railway from Aketi to Bondo, with power to build various other



Sketch map of the Vicicongo Railway and adjacent principal roads, showing how they form the link between the valleys of the Congo and the Nile



Sketch map of French and Belgian railways which link harbours for sea-going shipping with navigable stretches of the River Congo above the rapids

light railways in this area. Although the lines are laid to the 2-ft. gauge, the bridges, etc., have been built so that easy conversion to the 3 ft. 6 in. gauge may be made. In 1924, also, a subsidiary company was incorporated for the purpose of running road motors in the Welle district; this company subsequently developed many hundreds of miles of road motor services.

This railway makes contact with the Congo-Nile road that extends the line of communication through the Anglo-Egyptian Sudan to Egypt itself. As is natural, precise information will not be available during the continuance of hostilities regarding the way in which this chain of communications has been developed, and the value which it has proved to the Allied Forces. It may be mentioned, however, that it traverses territory entirely under the control of the Allies, and therefore is available for the transport of all kinds of war materials, without the limitations which apply to railways, etc., crossing neutral territory.

Some years ago the rolling stock of the Vicicongo Railway comprised only 14 locomotives, 117 bogie wagons, and 2 railcars, with trailers for passenger service, but this rolling stock has subsequently been strengthened considerably, and it is reported that 1½-ton diesel locomotives have been built at a plant in Johannesburg and exported to the Belgian Congo for use on this line. In addition, some 15 interesting 2-8-2 tender locomotives have been, or are being, obtained, capable of a top speed of 45 km. an hour. (28 m.p.h.). They have a maximum axle load of 7·87 tons, and a total fixed wheelbase of 11 ft. 10 in.

The maximum gradient of the Vicicongo Railway is 1 in 67, compensated in the curves, and the minimum radius of curves is 656 ft. on the main line and 164 ft. on branches.

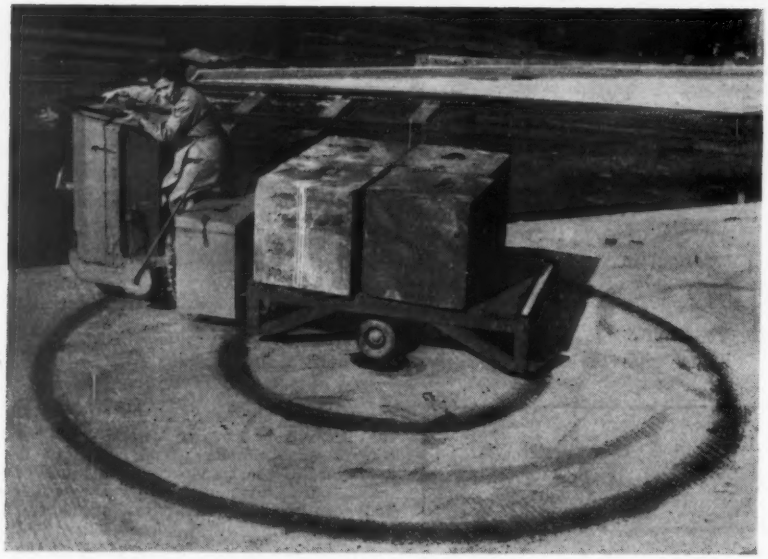
In describing what is primarily a Belgian line of communication, we have naturally mentioned the Belgian railway between Matadi and Léopoldville as one of the principal links. It should not be overlooked, however, that there is also the French Congo-Ocean Railway linking Pointe Noire with Brazzaville, which is available as an alternative link between a port on the Atlantic Ocean and the navigable reaches of the River Congo.

LONDON SALVAGE DRIVE.—The London Salvage Drive, the greatest of its kind yet attempted, will be inaugurated by the Lord Mayor and Lady Mayoress of London at the Mansion House to-day (June 4) at 11.15 a.m. The drive commences on June 5 and continues until June 19, and is for all types of salvage. Trafalgar Square, which will be transformed into a panorama, "London Goes to Sea," and there will be demonstrations of various defence weapons, which have not yet been shown to the public. Numerous other exhibitions will be held, some details of which were given in our last week's issue. For those in doubt as to the safety of dispensing with certain papers, a guide has been prepared by the Waste Paper Recovery Association, 154, Fleet Street, E.C.4, which can be obtained on application. The British Records Association, 8, New Square, Lincoln's Inn, W.C.2, has prepared a memorandum concerning records which may have historical value.

SMALL TRADERS' INSURANCE.—Small traders and manufacturers, and professional men, are reminded by the Board of Trade that unless they insure their stocks and equipment they run a grave risk of losing them without receiving compensation. The insurance of stocks is compulsory only if they are worth more than £1,000 (or £200 in the case of licensed food retailers), but there are large numbers of establishments where stocks run below this figure; under the Commodity Insurance Scheme they can cover every £100 of stock for 2s. 6d. a month. The insurance of equipment can be effected under what is known as the Business Scheme. Here, again, the limit for voluntary cover is £1,000; the cost is 5s. for every £100 for a period of six months. Losses of less than £100 are paid when they are settled; but losses above this amount will not be paid until after the war. Interest at 2½ per cent., however, will accrue as from the date of loss. Copies of a leaflet giving full particulars are available through chambers of commerce, chambers of trade, and local information centres.

Electric Industrial Truck

A low-loading articulated unit with a small turning circle and a carrying capacity of two tons



EXTENSIVE use is made of power-driven trucks for goods transportation in factory and other premises; the railways employ them for shifting quantities of baggage and mails at busy stations, also in yards and goods depots. Many of the trucks developed to facilitate short-distance transport in confined areas are powered by petrol engines but others are of the electric battery variety. The advantage lies with the latter type at the present time because of stringencies in the supply of internal-combustion-engine fuels.

The accompanying illustration shows the sharp-turning ability of a battery-driven truck recently developed by the Brush Electrical Engineering Co. Ltd.; its smallest turning circle is of only 6 ft. radius. The length and width of the truck are 10 ft. 6 in., and 3 ft. 8 in. respectively, so that it will easily negotiate right-angle turns in a 4 ft. 6 in. gangway. The platform is given a low position (alternatively 18 in. or 11 in.) for loading; it is raised through a distance of 4 in. into the running position by means of the long-handled pump seen to the left of the driver's feet. Only 15 sec. are occupied in raising the normal maximum load of 2 tons. The truck is run under the load, which is assembled on a "stillage" or table-like stand which has four short legs between which the lowered truck platform can be backed.

The speed of the truck, fully laden, is 5 to 6 m.p.h., but the controller provides four speeds in forward and reverse. The motor field winding is in sections, which the controller puts alternatively in series or in parallel, thus minimising the dependence on starting resistances for speed variation. The contactor action is subject to an automatic time delay which ensures that the steps from speed to speed occupy a minimum interval of 3 to 4 sec. The motor has a one-hour rating of 55A. at 38V and 1,400 to 1,500 r.p.m. It is totally enclosed and connected to the pneumatic-tyred steerable front wheel of the truck by gearing and a chain.

Both motor and controller are mounted so as to turn with the steering column; consequently the cables to the motor are not subjected to any twisting or straining action. Only the main battery connection needs to be flexible. Not only does this arrangement obviate a possible source of trouble but it enables the steering to be made very light to the touch, an important point where sure and accurate driving is required. The truck is provided with two brakes, a foot-operated internal-expanding Bendix brake and a pistol-grip hand brake.

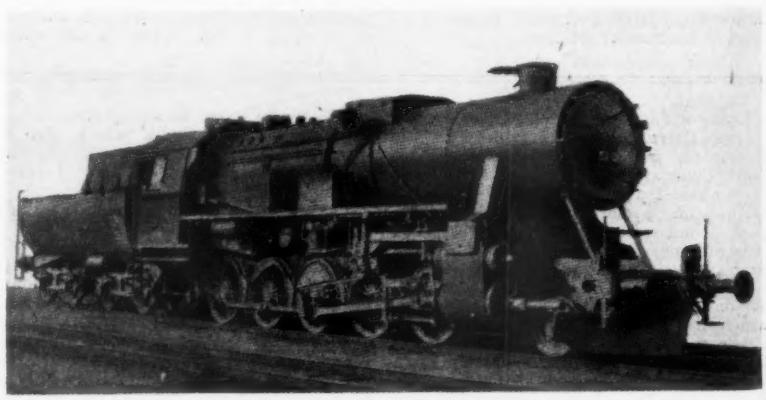
The battery consists of 20 lead-acid cells of 144 A-hr. capacity. Exide, D.P., Britannia, or Tudor batteries are normally supplied but nickel-iron batteries can be fitted if specified. The battery in its container, which is strongly constructed of metal, is easily removed for replacement by another when discharged. The truck is thus capable of giving practically continuous 24-hr service. The battery charging rate is 28A., tapering off to 14A. at the finish.

German Austerity Locomotives

SOME further particulars of the German "austerity" locomotive, "Series 52," described in THE RAILWAY GAZETTE for December 4, 1942, p. 540, have now become known. The plans had to make provision for the widest use of materials which are readily available in Germany, and for the most economical use possible of the reduced quota of steel; also they had to show a saving of labour in production. All precision work for these reasons has been cut down to a minimum, and the parts have been designed to allow mass production by sharing out a number of parts among many different factories. Copper has been replaced by steel; the firebox is entirely of steel. Coupling rods are made of rolled sections, with ends of pressed steel electrically welded to them. The weight on the driving wheels had to be kept as high as in the prototype; therefore economies had to be found in the selection of raw materials rather than in the amounts employed to make the finished parts of the locomotive; a plate frame instead of the original bar frame was adopted for this reason. The weight of the tender could be reduced to any desired limit; this has been achieved by making the tender sides serve for a frame, and by using two standard goods-wagon bogies. The tare weight has been brought down from 26 tons for the "Series 50" locomotive tender to 18 tons for the "austerity" tender, notwithstanding an increase in the coal capacity from 8 to 10 tons and in the water capacity from 26 to 34 cu. m.

The engine was in the first place designed for use in the severe climates of occupied Eastern Europe; the driver's cab is entirely closed and the gangway to the tender is provided with a concertina passage. Crews were expected to have to work the engine in long shifts, and consequently armchairs have been provided for both driver and fireman. A hammock is provided in the driver's cab for one man to rest while the other attends the fire.

The first of the completed locomotives together with a train of some new type goods wagons was sent on a tour to all the workshops engaged on building these engines. The route taken was from Berlin to Poznan, Elbing, Warsaw, Krakow, Vienna, Pilsen, Munich, Stuttgart, Cologne, Liege, Lille, Brussels, Duisburg, Kassel, Hanover, and back to Berlin.



German austerity locomotive "Series 25"

British Railways and the War—112

A selection of photographs from "Facts about British Railways in Wartime"

(*See also page* 562 *and editorial article, page* 551)

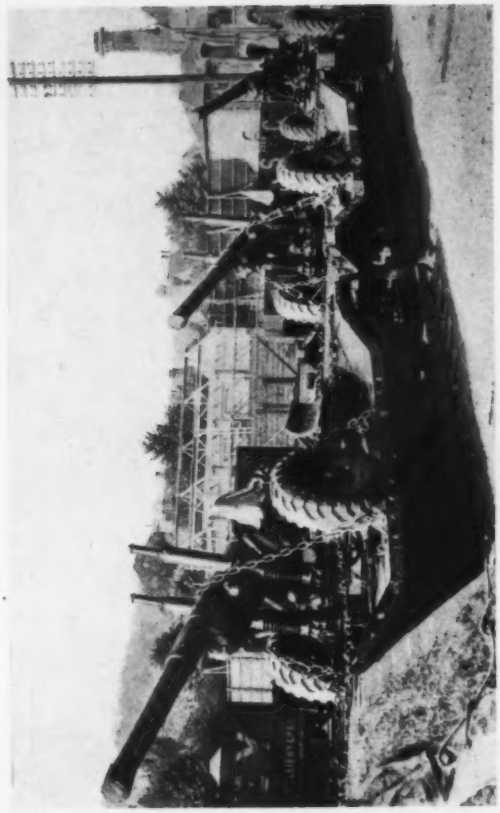
Above: Tracks are restored

Right: War improvements

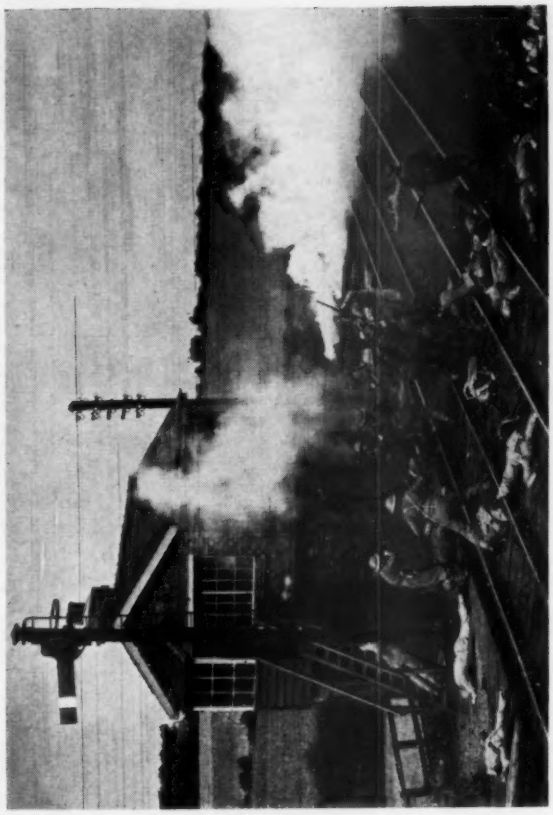
Left: New station for war workers

"Times" Photo]

SOME FURTHER ILLUSTRATIONS OF THE WARTIME ACTIVITIES OF BRITISH RAILWAYS



Weapons of every kind



Training as Home Guards

The troops entrain

Tanks for Russia

RAILWAY NEWS SECTION

PERSONAL

BIRTHDAY HONOURS

Knights Bachelor

Charles Henry Newton, Chief General Manager, L.N.E.R.

C.B.E.

Capt. B. H. Peter, Board of Trade Representative, S.W. Regional Board, Chairman, Railway Brakes & Signalling Export Group, Managing Director, Westinghouse Brake & Signal Co. Ltd.

A. S. Quartermaine, Chief Engineer, G.W.R.

V. A. M. Robertson, M.C., Engineer-in-Chief, L.P.T.B.

L.N.E.R. APPOINTMENTS

The L.N.E.R. announces the following appointments:—

Mr. A. E. Tattersall, Signal & Telegraph Engineer (London), to be Assistant Chief Engineer (Signals).

Mr. A. R. Jefferson, Acting Assistant Locomotive Running Superintendent, Scottish Area, to be Acting District Locomotive Superintendent, Newcastle.

Mr. I. V. Longley, Acting District Locomotive Superintendent, Darlington, to be District Locomotive Superintendent, Darlington.

Mr. E. A. J. Bilham, Senior Assistant, Engineer's Office (London), to be Acting District Engineer, Leeds.

Mr. E. D. Robinson, Acting District Engineer, Cambridge, to be District Engineer, Cambridge.

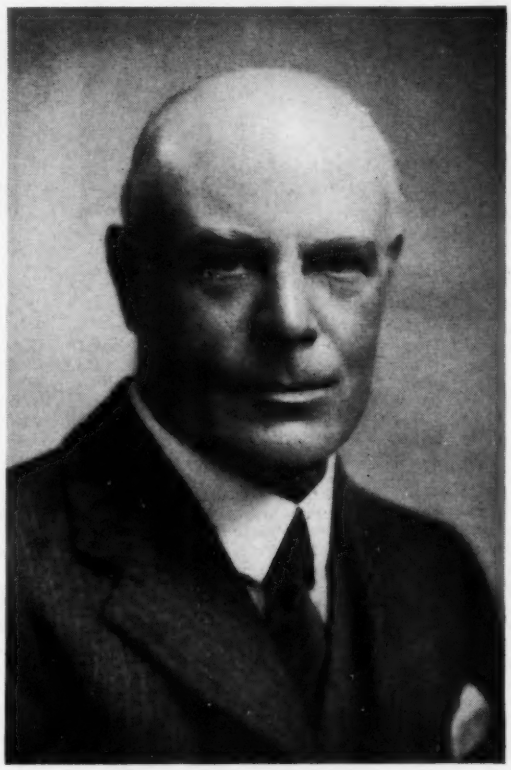
Mr. F. W. Carr, having been released from the special duties which he has been performing recently, has returned to his former post as Mechanical Engineer, Stratford.

Mr. D. R. Edge, who has been acting as Mechanical Engineer, Stratford, will be transferred temporarily to the Ministry of War Transport to act as Adviser on repairs to requisitioned wagons.

The Minister of War Transport has apointed Sir Alfred Faulkner to be Regional Transport Commissioner for the Eastern Region, in succession to the late Sir Haviland Hiley. Sir Alfred is also Director of Alternative Motor Fuels.

We regret to record the death at Coonoor, India, at the age of 55, of Mr. A. C. Rose, who, until his retirement on account of failing health early this year, was Deputy General Manager, Madras & Southern Mahratta Railway. Mr. Rose entered the service of the former Midland & Great Northern Joint Railway under Mr. William Marriott in 1905, and specialised in signalling; he transferred to the Signal Department of the then Midland Railway, under Mr. W. C. Atfield, in 1911. In 1913 he was appointed Signal Inspector to the Ceylon Government Railway; and in 1919 he joined the Madras & Southern Mahratta Railway as Assistant Signal Engineer. In 1936 he became Deputy Chief Engineer, Signals, and later acted as Deputy Agent, until in 1938 he was confirmed in the latter position, with the title of Deputy General Manager. (*See editorial note, page* 550).

Mr. Robert Bell, C.B.E., who retired on May 31, has been Assistant General Manager of the London & North Eastern Railway since its formation in January, 1923. But for the war, he would have retired in November, 1939, on reaching the age of 65, in accordance with L.N.E.R. practice. Mr. Bell was educated at Edinburgh University and St. John's College, Cambridge, and joined the staff of the North Eastern Railway in 1898, at the suggestion of Sir George Gibb. He started work in the Chief Goods Manager's Office at York. Two years later he was transferred to the Hartlepools, where he obtained a wide experience in dealing with goods and associated traffic in that busy district. In 1907 he returned to York, and, after holding various responsible positions, was appointed Assistant Goods Manager at the beginning of 1914. The distinction of C.B.E. was conferred on him in 1918. Early in 1922 Mr. Bell was appointed Assistant General Manager of the former North Eastern Railway. At that time, arrangements for the formation and organisation of the London & North Eastern Railway, whose constituent companies were the former Great Central, Great Eastern, Great Northern, North British, Great North of Scotland, and Hull & Barnsley Railways, were in active progress. Mr. Bell was closely associated with Sir Ralph Wedgwood in this work, and continued as Assistant General Manager when the London & North Eastern Railway started operations on January 1, 1923, as one of the four main-line companies. On Sir Ralph Wedgwood's retirement in March, 1939, as Chief General Manager, Mr. Bell continued as Assistant General Manager, and in the autumn of that year, at the request of Sir Ronald Matthews and Mr. C. H. Newton, the present Chief General Manager, he postponed his retirement. Mr. Bell was Chairman of the managing committee of the Railway Research Service from its inception; and is Honorary Librarian of the Institute of Transport, whose Triennial Gold Medal he was awarded in 1929 for a series of reviews of transport developments, delivered to the institute over a period of ten years. An editorial article on Mr. Bell's railway career appears on page 553.



Mr. R. Bell

Assistant General Manager, L.N.E.R, 1923-43

Colonel Sir W. Charles Wright, Chairman of Baldwins Limited, and a Director of the G.W.R., who was Controller, Iron & Steel, Ministry of Supply, 1940-42, has been elected an honorary member of the Iron & Steel Institute.

We regret to record the death on May 27, at the age of 65, of the Rt. Hon. J. G. Coates, M.C., member of the New Zealand War Cabinet, and formerly Prime Minister of the Dominion. He was Minister of Railways from 1923 to 1928, during the last four years of which period he was also Prime Minister. Mr. Coates was Minister of Transport from 1931 to 1935.

Colonel William Harold Newman, E.D., Secretary for Railways, New South Wales, whose death in Melbourne, on March 9, in his 54th year, was recorded in our March 26 issue, began his career in the Department of Railways in 1905. He was appointed Information Officer in 1921; Assistant Secretary for Railways in 1927; and Secretary for Railways in 1930. In 1929, with Mr. T. J. Hartigan, the present Commissioner for Railways, New South Wales, he studied railway operation in Europe and America. During the war of 1914-19 he was engaged on military duties for three-and-a-half years. On June 26, 1940, he entered the Department of the Army as Director of Railway Transportation in Australia.

Mr. W. S. Barnes, Estate Surveyor, North Eastern Area, L.N.E.R., who, as recorded in our May 21 issue, has been appointed in addition Rating Surveyor (England & Wales) to the company, was educated at Bootham School, York, and practised as a surveyor, as a partner in the firm of Harry Barnes & Partners, of Westminster, from 1926 until 1938, and as a partner in the firm of Ryde, Sons & Browne, also of Westminster, from 1938 until 1940, when he entered the service of the London & North Eastern Railway Company as Estate Surveyor, North Eastern Area. In 1935 he was appointed County Valuer of Lancashire, advising the County Valuation Committee on rating matters, and as one of the valuers advising the Railway Assessment Authority. Mr. Barnes is a Fellow of

SOME FURTHER ILLUSTRATIONS OF THE WARTIME ACTIVITIES OF BRITISH RAILWAYS

XUM

Mr. W. S. Barnes

Estate Surveyor, North Eastern Area, L.N.E.R.; appointed also Rating Surveyor (England & Wales)

the Chartered Surveyors' Institution, of which he holds the Special Diploma in Rating. He is a member of the Rating Surveyors' Association; and is Chairman for the current year of the Railway Estate Agents' Conference.

PRESENTATION TO SIR JAMES MILNE

To mark the occasion of the 60th birthday of Sir James Milne, General Manager of the Great Western Railway, the directors presented him with an inscribed silver inkstand, as a token of their esteem and affection, at a board meeting on May 28. The Chairman, Sir Charles Hambro, in making the presentation, referred to the exceptional services rendered by Sir James, not only to the country, but also to the G.W.R., during the unusually long period of his General Managership; and he expressed the hope that Sir James's great experience would be available to the board for many years to come. In acknowledging the gift, Sir James referred to his happy associations with the company over a period of nearly 40 years, and to the endeavours which he had made to uphold its traditions and to strengthen its position in the sphere of transport. He thanked the board for its support and encouragement, and the officers and staff for their loyal and able assistance. The inscription on the inkstand reads as follows:—

PRESENTED TO
SIR JAMES MILNE, K.C.V.O., C.S.I.
(GENERAL MANAGER, G.W.R.)
WITH THE BEST WISHES AND SINCERE REGARD
OF THE GREAT WESTERN RAILWAY
DIRECTORS
4TH MAY 1943

We regret that, in our May 21 issue, in recording that Mr. H. W. Clark is to assist the Chief Engineer (Civil), L.P.T.B., consequent on the resignation of Mr. J. H. Condy from the position of Assistant Chief Engineer (Civil) to the board, Mr. Clark was described inadvertently as Indoor Assistant to the Permanent Way Engineer (Railways); this should have read, Indoor Assistant to the Assistant Chief Engineer.

Mr. A. Dingley

Appointed District Locomotive Superintendent, Nottingham, L.M.S.R.

Mr. A. Dingley, Assistant, Office of Divisional Superintendent of Operation (Motive Power), Manchester, L.M.S.R., who, as recorded in our May 14 issue, has been appointed District Locomotive Superintendent, Nottingham, entered the service of the former L.N.W.R. at Abergavenny in 1910. He served with the Armed Forces from August, 1914, until January, 1919; in February of the latter year he resumed his training, at Crewe. In 1920 he was appointed Assistant at Edge Hill Motive Power Depot; six years later he took charge at Bangor. In 1932 he became Assistant District Locomotive Superintendent, Leeds; and he was appointed to a similar position at Sheffield in January, 1935. Mr. Dingley was transferred to the Office of the Divisional Superintendent of Operation, Manchester, in June, 1940.

PRESENTATIONS TO MR. R. BELL

On Monday, May 24, the staff of the Chief General Manager's Office at L.N.E.R. Headquarters was entertained to tea by Mr. Bell, to whom was presented a dictionary of quotations and a fountain pen by Mr. J. M. Fleming on behalf of the staff, with the promise of further books to follow.

At the close of the emergency board meeting at Liverpool Street on Thursday, May 27, Sir Ronald Matthews, L.N.E.R. Chairman, presented Mr. Bell with a silver salver engraved with the names of the directors of the company.

At York on Friday, May 28, Mr. C. M. Jenkin Jones, Divisional General Manager, North Eastern Area, supported by Mr. Thos. Hornsby, former Divisional General Manager of the North Eastern Area, presented Mr. Bell with a bookcase and books on behalf of former North Eastern Railway friends of long standing.

A further presentation to Mr. Bell by the Officers of the L.N.E.R. is to be made at Liverpool Street to-day, Friday, June 4.

Mr. A. Endicott, Estate & Rating Surveyor to the Southern Railway, has been elected to the council of the Chartered Surveyors' Institution as the representative thereon of surveyors in the service of statutory undertakings in Great Britain, Northern Ireland, and Eire.

Mr. J. Purves

Principal Assistant for Carriages & Wagons to Chief Mechanical Engineer, L.M.S.R., 1931-41

Mr. J. Purves, Principal Assistant for Carriages & Wagons to the Chief Mechanical Engineer, London Midland & Scottish Railway, whose retirement from that office was recorded in our August 29, 1941, issue, since when he was engaged on special duties, has now retired from the railway service. He began his career with R. & W. Stephenson & Co. Ltd., of Newcastle-on-Tyne, and finished his apprenticeship at the old North Road Works of the North Eastern Railway at Darlington. Subsequently he was transferred to the Carriage & Wagon Department at York, and in due course became an Inspector of Materials. In 1905 he entered the service of the Midland Railway at Derby as Inspector, and was appointed Outdoor Assistant to the Carriage & Wagon Superintendent as from June 1, 1909. In 1923 he became Chief Outdoor Assistant to the Carriage & Wagon Superintendent, L.M.S.R., and Divisional Carriage & Wagon Superintendent, Wolverton, in 1928. In January, 1931, Mr. Purves was appointed Principal Assistant for Carriages & Wagons to the Chief Mechanical Engineer. Mr. Purves was created an M.V.O. (Fourth Class) in January, 1939, on the occasion of the centenary of the railway.

Among those elected recently to corporate membership of the Institute of Transport are Mr. H. J. Comber, Chief Officer for Labour & Establishment, L.M.S.R.; Mr. S. W. Nelson, Director of Transport, Ceylon; and Mr. F. J. Wymer, Assistant (Planning) to General Manager, Southern Railway. Those elected to associate membership include Mr. A. J. Chouffot, Divisional Superintendent (Central Buses), L.P.T.B.; Mr. C. A. M. Peaty, G.W.R.; and Mr. J. W. G. Withers, District Superintendent (Country Buses & Coaches), L.P.T.B.

On April 2, Mr. P. W. Dobson, Locomotive Superintendent, Buenos Ayres Midland Railway, was elected Chairman for 1943 of the River Plate Branch of the Institution of Locomotive Engineers, in succession to Mr. J. Mailer, Chief Mechanical Engineer of the Buenos Ayres Great Southern Railway, and of the Buenos Ayres Western Railway, who has resigned.

TRANSPORT SERVICES AND THE WAR—192

Travel to and from Ireland

The railway and steamship companies have given the customary wartime summer notice that they will not issue rail and steamship tickets for travel to or from Ireland between the following dates unless the passenger is in possession of a sailing ticket which must be obtained in advance. The requirement regarding sailing tickets will apply: (*a*) to travel *via* Holyhead from June 7 to September 30, both dates inclusive; (*b*) to travel *via* Heysham and Stranraer from July 1 to August 31, both dates inclusive.

Application for sailing tickets, which, as on former occasions, will be issued free of charge, should be made at least ten days before the date of the proposed journey, and must state clearly the proposed route and date of travel, together with an alternative date. Passengers to Ireland are reminded that they must also be in possession of the necessary exit permit.

Rapid After-Raid Rail Repairs

In a raid on the North-East Coast some little time ago, damage was caused by bomb explosions at an L.N.E.R. station. Debris blocked the up and down main running lines, as well as one of the mineral lines. All traffic was stopped, and late night trains from inland to the coast were diverted by an alternative route to another point not far away. Passengers were conveyed to their destination by bus. Telephone wires and a signal box were damaged by another bomb in the same neighbourhood; 42 panes of glass were broken and slates blown off the roof, and, to complicate matters, a balloon cable was reported to be trailing across the lines not far from this station. At the station itself, all windows and doors were blown in, the electric light was out of order, the booking office had ticket racks damaged, and the station-master's house and other L.N.E.R. property were minus doors and windows. A goods shed at another station lost many windows.

Five hours later the debris was cleared away, all lines were clear, trains were passing at caution, and by 7 a.m. thanks to the untiring work of the Engineer's repair gangs, order was restored, and the long freight and mineral trains were able to proceed, as usual, with their vital traffic. We cite this merely as typical of many similar accounts which reach us of such rapid after-raid railway repair.

Transport of Soft Fruit

New Ministry of Food Directions, effective from June 7, restrict the consignment by rail or road of specified soft fruits, so as to limit the length of the haul.

Vienna Horse Buses

A message of May 21 says that horse buses have reappeared on the streets of Vienna, in view of the acute petrol and rubber tyre shortage.

Electric-Steam Wartime Shunting

Shunting at the St. Gallen and Zollikofen Stations, Swiss Federal Railways, is now being effected with peculiar electro-steam locomotives (E3/3 8251, 8522), which work by steam generated by electric heaters. The electric equipment consists of a pantograph (taking current from the overhead power line), main switch, two air-cooled oil transformers, and two evaporators situated on each side of the boiler, in which are loops of tubes around the secondary winders of the transformers. The electrical apparatus was provided by Brown-Boveri & Company of Baden, and was installed in the Yverdon workshops of the Swiss Federal Railways. This method has been adopted in view of wartime shortage of coal as locomotive fuel, and of new electrical equipment.

Cologne Women Tram Drivers

The Cologne local transport undertaking is employing women tram drivers, according to the Berlin radio. Several other German towns are proposing to do likewise.

Gauge Conversion in Russia

In December and January last, about 1,000 miles of railway line were restored in liberated districts of Soviet Russia, according to a report in the *Soviet Monitor*. This included the reconversion of the German standard gauge to the Russian broad-gauge track.

New Bulgarian Railway

A new 2 ft. 6 in. gauge railway connecting Belitsa with Banjsko, both in the valley of the River Mesta, in south-western Bulgaria, was opened on March 3. The new line is 11 miles long and forms an extension of the branch from Saraniovo (Saramfey) off the Sofia-Plovdiv main line. The section from Yakoruda to Belitsa (9 miles) was completed some time ago.

Assistance from Siberia

Soon after the southern part of the railway line between Moscow and the Donetz Basin had been cleared of the enemy, the railwaymen working there received help from fellow railwaymen in Siberia, who had promised assistance in restoring the destroyed lines. Only a few days ago a trainload of 49 wagons from Siberia reached the Moscow to Donetz Basin railway line. They were filled with equipment for use on the railways, and with such items as medical stores and motion-picture projectors.

Norwegian Railway Restrictions

The regulation which came into force in Norway on April 20 (to which we made brief reference in our April 30 issue, page 441) constituted an extension of the already strict control of civilian travel by rail. Since February, 1942, civilians wishing to travel on lines other than local ones running a distance of about 50 km. have had to obtain permission from the transport authorities, who have granted it only if the journey was considered essential. This rule was introduced because of the pressure on the railways due to the fortification work on the west coast. Under the present regulation the reasons for which journeys of more than 30 km. will be allowed are specified, and authority to grant permission is transferred to the police. It is being accorded only for journeys in connection with State or Party business, necessary professional and commercial affairs, sickness, or imperative family circumstances. Those who have season tickets for the frontier must also obtain permission to travel.

The measure is being linked in the Norwegian press with the labour drive, and is represented as a necessary saving of traffic space for transport of mobilised workers and food supplies. Taken in conjunction with police regulations issued on March 25, however, it involves a considerable tightening of police control over the public. Since March Norwegians have been subject to police supervision in cases where this was considered necessary, and can be ordered to stay indoors between 11 p.m. and 5 a.m. The police can also demand the key of the house if they wish to make periodic searches.

Further restrictions were introduced on June 1, but precise details are not yet known.

Railway Restoration in North Africa

Now that the campaign in North Africa has been brought to a successful conclusion, it becomes permissible to refer in slightly more detail to the difficulties experienced by the Allied Armies through inadequacy of railway lines of communication. In March last the public services of the railways in French Morocco were sharply curtailed by reason of restrictions placed on the consumption of electric current. This was necessitated by the severe shortage of hydro-electric power resulting from drought. Services on the Casablanca-Rabat-Fez main line were reduced from once daily to thrice weekly, and operations over this important section were augmented by motor transport. Cuts were also made in the railway services between Casablanca and Marrakech, and on the branch from Sidi-el-Aidi to Oued-Zem; these lines are in direct connection with the Casablanca-Fez main line, and, like it, are built to the standard gauge of 4 ft. 8½ in. Algerian services were restricted to one trip a week.

More recently, some account of the work of the railways in North Africa in connection with the campaign has been given by Brigadier-General Carl Gray, Director-General of Military Railway Services, North Africa. The Americans serving under him were all railwaymen, the officers averaging 16 years of railway experience, and the men 5. General Gray himself is a former Executive Vice-President of the Chicago & North-Western Railway. Their enthusiasm, he said, was matched by that of the British engaged in the same work, and all regarded themselves as railwaymen in uniform.

Already, practically all the railways have been restored to service, and most of the lines were brought into use within periods varying from two hours to ten days after their capture. According to a report of General Gray's remarks, made by a special correspondent of *The Times*, the whole Tunisian network is back in operation except on a 125-ft. ridge which was completely demolished; this, however, was expected to be in running order by May 25. Another idle stretch was a spur not essential to military operations, which was to be working by the end of last month.

Of the 6,500 men under General Gray's orders, the British were the specialists in construction. They had bridging material in standard units which could be fitted together rapidly. With such material it was possible on the Kasserine-Sousse line to complete repairs to seven badly damaged bridges in 10 days. At many places diversions were built along the lie of the land so that the railway was usable before the bridges were repaired. Lt.-Colonel John Rattar was in charge of the British reconnaissance and construction units. In the case of the Kasserine-Sousse line, the changeover from diversions to new temporary bridges was effected in the one 24-hour period of April 30-May 1. When Mateur was taken, the Allies came in possession of an isolated spur leading to Tabarka. They found one engine, 19 wagons, one diesel car, and one lorry with flanged wheels. With these they organised within a few hours haulage at the rate of 300 tons a day to the front.

Some of the most daring work was undertaken at the beginning of the campaign in order to prevent the rolling stock in Tunisia falling into German hands. A small body of men under Lt.-Colonel Okie

set off in a lorry to Gafsa, whence they removed 13 locomotives and many wagons, running the gauntlet of enemy tank patrols, which fired on them in one place at 150 yards' range. What could not be withdrawn was disabled by the removal of parts taken away for future use.

When retreating, the Germans left large quantities of rolling-stock in good order, including at least 50 serviceable locomotives. They planted charges in many bridges, embankments, tunnels, and points, but, in their final hasty withdrawal, failed to fire them.

Shipping Control in South Africa

After discussing with various authorities the question of establishing an organisation for the allocation of vessels to those ports in the Union which are in the best position to handle them, the Minister of Railways & Harbours, Union of South Africa, has appointed a Ports Allocation Executive, consisting of the Director of Port & Shipping, Cape Town (Chairman); the Controller of Ship Repairs, or his representative; and one representative each of the South African Railways & Harbours, the South African Naval Forces, the British Admiralty, the British Ministry of War Transport, and the United States War Shipping Administration. The Minister of Railways & Harbours may appoint to be a member of the executive any other person, with special knowledge and experience of shipping matters. The executive will exercise its powers subject to the direction of the Minister. It may (*a*) order any ship destined for any port in the Union to proceed to some other port; and (*b*) order any ship in any port in the Union to proceed to any other port. The executive or any member thereof, and the Minister of Railways & Harbours and the railways & harbours administration or any servant thereof, shall be exempt from liability in respect of any loss or damage which may be caused to any person, company, or association by reason of the exercise by the executive of the powers conferred on it.

In connection with the establishment of the Ports Allocation Executive, the office of the Controller of Ship Repairs has been transferred from Durban to Cape Town. Mr. W. H. Waudby, who has been in charge since October, 1941 (see *The Railway Gazette* of November 28, 1941), has relinquished his position on being appointed Assistant Chief Mechanical Engineer, South African Railways & Harbours. He has been succeeded as Controller of Ship Repairs by Lt.-Colonel W. Marshall Clark, who, as recorded in our February 19 issue, recently had been appointed Chief Works & Estates Officer, General Manager's Office, South African Railways & Harbours, and who, a short time ago, received the O.B.E. for distinguished services rendered chiefly in connection with the construction of the railway from Haifa to Beirut (see our issues of September 25, 1942, page 306, and January 1, 1943, page 10).

Jamaica Transport Curtailment

Transport in Jamaica has been curtailed considerably because of coal rationing and equipment shortages. The railways have had to reduce their services, particularly for passengers. They face difficulties in obtaining materials necessary for the removal of their equipment because of wartime restrictions in exporting countries on the export of steel manufactures. Rationing of coal provides a further difficulty for the railways, which must now use wood fuel whenever possible. The Jamaica Government Railway consists of 210 miles of standard-gauge line. The Jamaica Tramway Company, operating in the city of Kingston and its suburbs, also has been handicapped by a shortage of equipment and replacement parts. Existing facilities have been taxed to the utmost because of the ban on all but essential private motorcar traffic. The company states that 25 per cent. of its buses have been rendered useless through breakdowns. Other transport services, such as those provided by motor lorries and buses, have been affected by the drastic rationing of petrol and fuel oil, and by shortage of replacements.

Passenger Restrictions in Canada

During a discussion by the Canadian House of Commons Railway Committee in April, some problems of handling increased wartime traffic with limited equipment were considered. On behalf of the Canadian National Railways it was stated that the railways administration had been informed that it could not expect to obtain any more passenger rolling stock for the duration of the war. Parlour cars have been withdrawn from the Montreal-Toronto, Montreal-Ottawa, and Ottawa-Toronto runs, and there is no immediate likelihood of their restoration. The coaches now used on these trains carry between 66 and 80 passengers, compared with 26 in the parlour cars.

Commonwealth Railways in Wartime

Although it is obvious that considerations of security have resulted in the elimination of much detail from the Report on Australian Commonwealth Railway operations for the year ended June 30, 1942, there is nevertheless included a considerable amount of interesting material. During seven months of the year in question, the war had entered a new phase in regard to Australia, by reason of the entry of Japan, and the three main railways operated by the Commonwealth (as distinct from the individual State Railways), are all of vital strategic importance.

Priority in both length and volume of traffic is naturally held by the Trans-Australian Railway, extending from Port Pirie Junction to Kalgoorlie. This is a standard-gauge line 1,108 miles long. The report states that the earnings in 1941-42 totalled £771,725, which was an increase of £283,335, or 58 per cent., over those of the previous year. For security reasons, information is not published regarding the number of trains worked and passengers who travelled, and the quantities of goods conveyed between Port Pirie and Kalgoorlie. Before the suspension of the ordinary passenger service, towards the end of March, 1942, four express trains were run each way weekly, together with an additional train practically every week in either one or both directions. Just before the end of June, 1942, the express train service was partly restored, but, in compliance with the desire of the Government to curtail non-essential traffic, it was limited to two trains weekly in each direction. Early in July, 1942, the ordinary passenger train service was further reduced to one train each way weekly. Non-essential traffic has been eliminated, and all travel is now subject to the priority permit arrangement, of which details have previously been published in these columns. Briefly, the Order (which became effective generally on July 1 last) is designed to effect a substantial reduction in the number of interstate trains, and requires that all persons travelling between one State and another are required to obtain a "priority permit to travel." These permits are issued only for essential travel, such as journeys by members of the Defence Service in uniform, Ministers of the Crown, Departmental officials travelling on business of national importance, persons on business directly or indirectly associated with the war effort, troops on leave, and certain types of emergency civilian travel. Even before the introduction of the permit system for interstate travel generally, action on similar lines was applied in May, 1942, to passenger traffic on the Trans-Australian Railway.

The line of transport between north and south, through the middle of Australia, is provided by two separated Commonwealth railways (the Central Australia and the North Australia), each of 3 ft. 6 in. gauge, linked by the strategic road which was described and illustrated in *The Railway Gazette*, November 28, 1941, page 553. The Central Australia Railway is 771 miles long, and extends from Port Augusta to Alice Springs. As in the case of the Trans-Australian Railway, traffic during the year ended June 30, 1942, was unprecedented; the earnings for the year were £1,010,510, compared with £276,831 in 1940-41, and £100,981 in 1935-36. For the year 1941-42 the working expenses were £462,688, showing a surplus of not less than £547,822. To assist in handling the increased traffic, arrangements were made whereby the South Australian and the Queensland Railways released locomotives, brake vans, goods vehicles, and water wagons, for service on the Central Australia Railway.

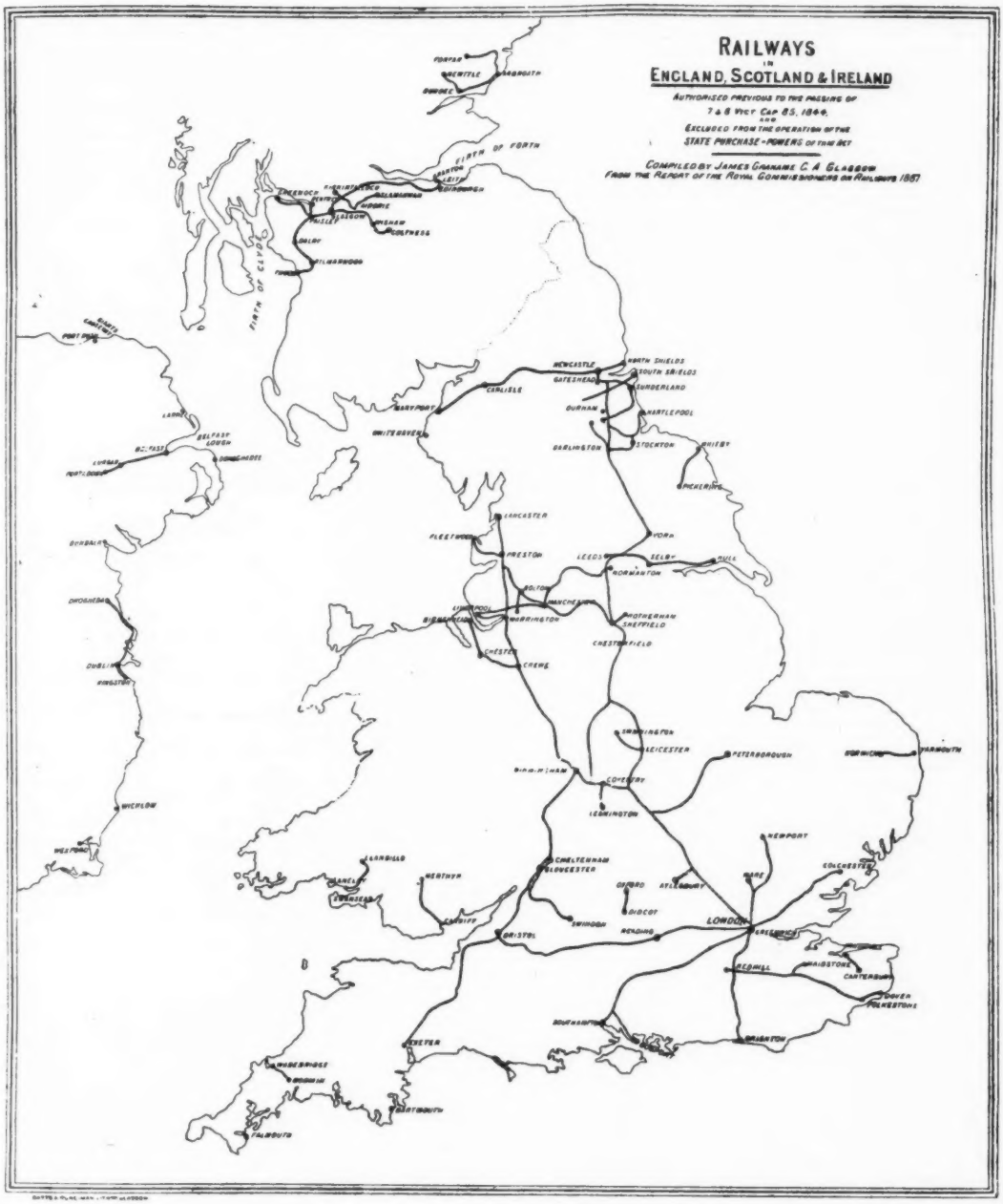
The road extends from the railhead at Alice Springs to Birdum, whence the North Australia Railway covers the further 316 miles to Darwin. In view of the strategic position of Darwin, this railway has assumed an importance vastly different from its original status, and it has become an essential line of communication of incalculable value to the war effort. For example, its train mileage of 263,203 in the year 1941-42 showed an increase of not less than 713 per cent. over the figure of 32,364 in 1938-39. Revenue comparison between the same two financial years shows an increase of 623 per cent., revenue rising from £55,329 to £400,119.

As a result of the Japanese air raids, which began in February 19, 1942, action necessary for the continued satisfactory functioning of the North Australia Railway was taken in accordance with pre-arranged plans. In June last, a communication was received from the military authorities which read, *inter alia*: "As a result of a recent inspection of the Katherine area and the improved railway transportation tonnages, the General Officer Commanding Northern Territory Forces has directed me to advise you he appreciates the willing co-operation of your staff in the task in which he is at present concerned."

As with the Central Australia Railway, arrangements were made for securing additional locomotives, brake vans, and goods vehicles; these were obtained from the Western Australian, South Australian, and Queensland Railways. There were obvious and considerable difficulties attending the shipment of locomotives and railway stocks from these States to Darwin. By reason of the dire necessity for additional locomotive power, four locomotives from South Australia had to be transported by rail to Alice Springs, and thence by road to a point near the southern terminus of the North Australia Railway.

"Pre-Nationalisation" British Railways

(*See editorial article, page 552*)



The State purchase of railways is a subject which has never been dead during the past 100 years, but at various periods it has come into considerable prominence and then receded again into the background. Exactly a century ago, the preparation for Parliament of the Bill which eventually became the Cheap Trains Act of August 9, 1844, was made the opportunity for placing on record the terms under which the Government might purchase railways.

The powers are limited to railways authorised after the passing of the Act, and exclude branches or extensions of less than 5 miles in length from existing or then-authorised railways. Such State purchase might be exercised after 21 years from the Act of authorisation of a line, whether such line be a trunk, branch, or junction line, and whether it be constructed by a new company incorporated for the purpose or by an existing company.

The authorised method of State acquisition was for the Treasury to give the owning company three calendar months' notice in writing, and to pay a sum equal to 25 years' purchase of the annual divisible profits estimated on the average of the three preceding years. As we point out in an editorial article (page 552), the assumption was that the average rate of profits would not be less than 10 per cent. per annum.

The Royal Commissioners on Railways (1867) stated in their report that there were 2,320½ miles of railway sanctioned before the session of 1844, which are therefore excluded from the compulsory purchase provisions. The railways in question are shown on the accompanying map. It will be seen that these lines include some of the most important in the country.

Danube-Sava-Adria Railway Agreement

According to information from Rome, the agreement concerning the Danube-Sava-Adria Railway (until 1918 Südbahn, or Southern Railway, of Austria) concluded at Brioni on August 10, 1942, between Croatia, Germany, Hungary, and Italy, the countries on whose territories sections of the company's system are situated, is to be ratified by Italy; the agreement, reference to which was made in our October 2, 1942, issue, then will become operative. Its main object is the organisation of the debt service in connection with the company's liabilities, in view of the fact that it has been established that the latter's lines are to pass into the individual ownership of those states in which they are located by December 31, 1968. The company's liabilities on January 1, 1942, totalled 86,853,550 gold francs, represented by debentures issued and by coupons in arrears not drawn up to that date. This total comprises 3,420,794 debentures of fr. 22.50 each, forming a capital of fr. 76,967,865, and coupons in arrears which, according to the value established by the agreement, represent fr. 9,867,685. The service in respect of this debt is to be secured by a special fund supplied by the signatory states in proportion to the mileage in each. The route-length of the whole system is 1,386 miles (2,236 km.). The yearly contributions, payable as from January 1, 1942, up till 1968, have been fixed as follows: Croatia, fr. 79,781; Germany, fr. 1,698,673; Hungary, fr. 591,710; and Italy, fr. 954,049. In addition, Croatia is to pay a yearly quota of fr. 200,000 for the redemption of the Zagreb—Karlovac line, 32·9 miles (53 km.); and Italy is to make a special yearly contribution in respect of the transit traffic over the D.-S.-A. lines to and from Trieste and Fiume. An additional income for the special fund is provided through the reserves of the former debenture fund of the Südbahn-Gesellschaft, although assets in this connection are comparatively small.

To facilitate payments, the agreement entitles the partner states to surrender to the company such debentures as they own. The debentures then would be held to be written off, and the annuities due to the company by the states concerned would be reduced by the corresponding amount. The lines also would pass in advance into the individual ownership of those states which surrendered to the company, within three months, debentures representing at least half the annuities due to the company capitalised for 27 years at the rate of 3 per cent.

The company retains its name and enjoys its former rights except where these are modified by the agreement. The headquarters remain at Vienna, but the board is reduced from 29 to 18 in number; the latter includes two members each appointed by the partner states. Creditors are to be represented by the already existing committee of debenture-holders. An international traffic committee is to supervise the operation of the system.

Administrative expenditure is to be covered by contributions from the four countries in the same percentage proportions as the annuities; the yearly total thus to be paid is fixed at fr. 940,000.

The interest rate in respect of debentures is to be fixed every year by the committee of debenture-holders in collaboration with the company. As a rule, the rate is to be 3 per cent. For the purposes of the agreement, a gold franc is considered to be equivalent to 9/31 gr. of fine gold; inasmuch as payments are not effected in gold, the company is at liberty to effect them in currencies of countries in which no monetary restrictions obtain up to the equivalent of the amount necessary to buy gold on that basis.

The Brioni agreement represents the second reconstruction of the former Südbahn-Gesellschaft; the first took place in 1923, when the name was changed to that of Danube-Sava-Adria Railway.

Mexican Railway Bonds

The Mexican Minister of Finance has given notice that holders of a number of railway securities are required to present them not later than June 30 for registration as to non-enemy ownership. Securities which are not registered within the time allowed will be presumed to be under the jurisdiction of an enemy country, and it will be unlawful to introduce into Mexican territory any of these securities except with the express authorisation of the Mexican Government. Registration outside Mexico may be effected at the Chase National Bank in New York, or London; at the Credit Suisse, Zurich; at the Mexican Embassies in Rio de Janeiro, and Buenos Aires; and at the Mexican Legation at Lisbon. The bonds affected by the notice are as follow:—

National Railways of Mexico, guaranteed general mortgage 4 per cent. 70-year sinking fund redeemable gold bonds, due October 1, 1977.

Vera Cruz & Pacific Railroad Company first mortgage 4½ per cent. gold bonds, due July 1, 1934.

National Railways of Mexico prior lien 4½ per cent. 50-year sinking fund redeemable gold bonds, due July 1, 1957.

National Railroad Company of Mexico prior lien 4½ per cent. gold bonds, due October 1, 1926.

National Railroad Company of Mexico first consolidated mortgage 4 per cent. gold bonds, due October 1, 1951.

Mexican International Railroad Company 4½ per cent. prior lien sterling bonds, due September 1, 1947.

Mexican International Railroad Company first consolidated mortgage 4 per cent. gold bonds, due September 1, 1977.

Pan-American Railroad Company first mortgage 5 per cent. gold bonds, due January 1, 1934.

Pan-American Railroad Company general mortgage 5 per cent. gold bonds, due January 1, 1937.

Mexican Central Railway Co. Ltd. 5 per cent. priority bonds, due July 1, 1939.

Mexican Central Railway Co. Ltd. 5 per cent. equipment and collateral gold bonds, first series, dated April 1, 1897.

Mexican Central Railway Co. Ltd. 5 per cent. equipment and collateral gold bonds, second series, dated October 2, 1899.

Mexican Central Railway Co. Ltd. 5 per cent. equipment notes, series 10, dated January 1, 1907.

National Railways of Mexico 6 per cent. secured gold notes, series "B," dated April 1, 1914.

National Railways of Mexico 6 per cent. secured gold notes, 3 months secured, dated December 1, 1913.

National Railways of Mexico 6 per cent. secured gold notes, 3-year secured, dated January 1, 1914.

National Railways of Mexico 6 per cent. secured gold notes, series "C," dated June 1, 1914.

National Railways of Mexico 6 per cent. secured notes, 2-year, due June 1, 1915.

National Railways of Mexico 6 per cent. secured notes, 2-year, due July 1, 1916.

Tehuantepec National Railway 5 per cent. gold loan, due June 30, 1953.

Tehuantepec National Railway 4½ per cent. gold loan, due June 30, 1953.

BUS TICKETS AND PAPER SALVAGE

London Transport bus tickets salvaged during the past twelve months totalled 800 tons. The floor sweepings of all vehicles are now salvaged and much valuable pulp recovered. But not all that could be; if it is a wet day, tickets thrown on the floor are trodden underfoot and carried into the street and lost. It is only the work of a moment to put tickets into the box, and passengers who do this as they leave the bus are helping to save paper and labour.

Staff and Labour

R.C.A. Annual Conference

The annual conference of the Railway Clerks Association was held at Blackpool. The proceedings were opened on May 25 by Mr. F. C. Watkins, J.P., M.P., the president of the association. In his address, Mr. Watkins said that the labour movement must work for the conquest of political power and for a new society based on public ownership and control. Public opinion would not be satisfied with better insurance benefits. They looked to the Government to make post-war Britain much better than pre-war Britain.

A.S.L.E. & F. Annual Conference

The annual conference of the Associated Society of Locomotive Engineers and Firemen was held at Southport. The proceedings were opened on May 25 by Mr. T. Burns, the President of the society. In his address, Mr. Burns said that the society was financially stronger than ever before and had assets approaching £800,000. He complained of the delay by the railways giving their reply to the claim for an all-round increase of 10s. a week, which the society had presented on March 8, and to which no reply had been given so far.

Parliamentary Notes

Railway Freights Rebates Bill

The Railway Freights Rebates Bill, which has passed the House of Lords, was read a second time in the House of Commons on May 25, and passed to a committee of the whole House.

Questions in Parliament

Tickets for Non-Manual Workers

Mr. Rhys Davies (Westhoughton—Lab.) on May 26 asked the Parliamentary Secretary to the Ministry of War Transport whether he was aware that certain railway companies, especially in the London area, discriminated against non-manual workers in issuing travel tickets at lower rates on the false assumption that they received higher wages than manual workers; and whether he would take action to remove this anomaly.

Mr. P. J. Noel-Baker (Joint Parliamentary Secretary, Ministry of War Transport): Workmen's tickets were originally intended only for artisans, mechanics, and labourers who travelled in the early morning hours; they are now issued to everyone who travels before a certain hour. They have been extended also to artisans, mechanics, and labourers who are employed on shift turns of duty, and who must, therefore, travel outside the normal hours of issue. Some other concessions also have been made, but it has been decided, after mature consideration, that any general extension outside the normal hours would be both impracticable and undesirable. Mr. Davies will see that the respective rates of wages earned by different categories of passengers have nothing to do with the limitations imposed on the issue of workmen's tickets.

Mr. Davies: Will the Parliamentary Secretary bear in mind that when these cheap tickets were first issued it was on the assumption that non-manual workers were better off than manual workers, and now that the position is very nearly reversed could we not have a universal system on the railways which would meet the problem?

Mr. Noel-Baker: I am well aware that this whole matter is full of anomalies, which

arise out of a history extending over more than 70 years. I have given all possible consideration to the matter. I have seen many deputations on the subject, and I think I have been able to satisfy them that it is impracticable to make changes in wartime and that the changes, if made, would bring more harm than good.

Railway Workers in Jamaica

Mr. T. Fraser (Hamilton—Lab.) on May 26 asked the Secretary of State for the Colonies whether he had considered the memorandum from the Jamaica Government Railway Employees Union dealing with the conditions of labour on the railway; and what it was intended to do to improve these conditions and to create a happy relationship between the government and the railway workers.

Colonel Oliver Stanley (Secretary of State for the Colonies): I have not received the memorandum referred to. I am asking the Governor to furnish a copy with his comments.

Mr. W. Thorne (Plaistow—Lab.): Has the trade union in question the same negotiating machinery out there as we have in this country?

Colonel Stanley: I would not say that it is exactly the same, but there is a big trade union movement in Jamaica.

Road Haulage Scheme

Sir Adam Maitland (Faversham—C.) on May 13 asked the Parliamentary Secretary to the Ministry of War Transport, what progress had been made with the road haulage scheme; and if he could state the yearly cost.

Mr. Noel-Baker stated in a written answer: 276 haulage undertakings are now controlled by agreement, 268 road haulage units are in operation. Applications by carriers to have their vehicles hired are now being received and hiring will begin shortly. It will not be possible to give the annual cost of the organisation until it has been in operation for a year. Apart from the amounts payable to the controlled undertakings under their agreements, which are in course of ascertainment, and the standing charges payable in respect of the hired vehicles, the numbers and carrying capacity of which are not yet known, an important part of the total cost will depend upon the operating expenses, which in turn will depend on the mileage run.

Mobile Canteens from Argentine Railwaymen

Presentation to Southern Railwaymen

At Victoria Station on May 28, His Excellency the Argentine Ambassador, Senor Don Miguel Cárcano, presented, on behalf of Argentine railwaymen, two mobile canteens to the staff of the Southern Railway. Similar presentations have already been made to the other main-line companies. Those present at the ceremony which took place in the Royal Waiting Room at Victoria, and at the subsequent luncheon, were:—

Mr. J. M. Eddy, C.B.E., Chairman; Viscount Davidson and Sir Sam Fay, Directors, Buenos Ayres Great Southern Railway; and Mr. R. Prickett, B.A.G.S. The Southern Railway was represented by: Mr. R. Holland-Martin, C.B., Chairman; Messrs. E. J. Missenden, O.B.E., General Manager; J. Elliot, Deputy General Manager; R. M. T. Richards, O.B.E., Traffic Manager; O. Cromwell, Chief Officer for Labour & Establishment; A. Cobb, Locomotive Running Superintendent; E. S. Moore, Divisional Locomotive Running Superintendent; C. Grasemann, Public Relations & Advertising Officer; There were also present: Messrs. G. Oxley, Locomotive Foreman, Feltham; H. Dudley, J.P., Chairman of Canteen Committee, Feltham; G. W. Mills, Secretary, and A. Richards, Member, Canteen Committee, Feltham; J. Rodgers, Locomotive Foreman, Guildford; H. Mallory, Chairman of Canteen Committee, Guildford; H. L. Jerome, Secretary, and P. J. H. Blackman, member of Canteen Committee.

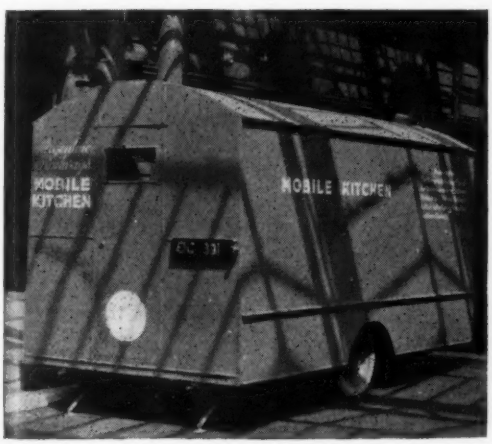
Mr. J. M. Eddy, in introducing Senor Cárcano, said that the non-British workers on the far-flung British railway system in the great republic of the Argentine had been thinking of their comrades on British railways with sympathy, goodwill and wonderful admiration of all they had done to keep the British flag flying and to secure freedom for the world.

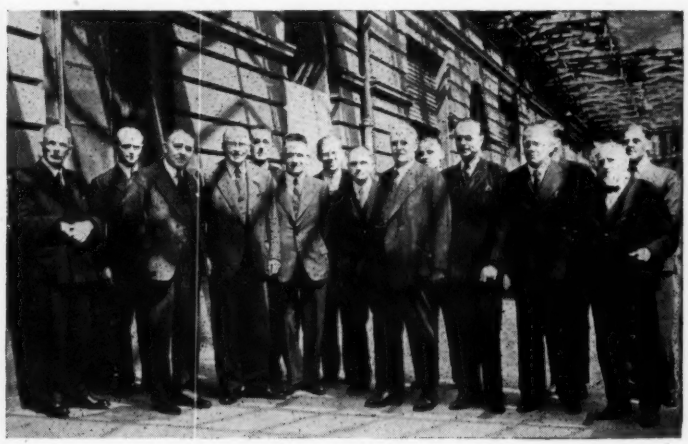
Senor Don Miguel Cárcano, in making the presentation said he was delighted again to be among British railwaymen. It proved the fellow feeling of his countrymen for their old and tried friends in Great Britain that food and clothing had been subscribed in the Argentine in this way. The kitchens represented modest contributions from a large number of the less highly paid workers. The amount of the contributions was less important than the number of subscribers. An important factor in Argentine progress had been the great capital outlay on the British company-owned railways. He thought he ought to point out that modern transport progress in the country was provided first by an Irishman, Thomas O'Gorman, who in 1800 replaced the bullock wagons by the two-horsed coach, which at that time was a speed revolution comparable to that of the aeroplane.

Mr. R. Holland-Martin expressed thanks for a great token of friendship between the workers of the two countries. It showed sympathy for this country in the fight for freedom and the solidarity of labour all over the world. In addition to already established canteens on the Southern Railway it had been necessary to erect 20 to meet wartime needs and 12 more were being built. When all were working in the war effort many had to come a long way from home and two places where help was needed most were Guildford and Feltham, where the mobile kitchens would serve a most useful purpose.

Lord Davidson described the ceremonies he had attended in the Argentine when contributions had been handed over. Admiration and sympathy for our difficulties and dangers were expressed, showing the brotherhood between all railway men. He had been particularly asked to pass on to British railwaymen the fraternal greetings of the non-British Argentine railwaymen to the British people.

RAILWAY BENEVOLENT INSTITUTION.—The eighty-fifth annual meeting of the members of the institution will be held at Euston Station, N.W.1, on June 30, at 4 p.m., to confirm the adoption of new rule 32 (A); to receive the report of the board of management; to admit to school benefits ten children in the Officers' Department; and to transact the ordinary business of the institution. The board will appoint to contingent annuities 122 widows and two members in the Officers' Department, and 1,000 widows and 186 members in the Servants' Department as applicants in excess of the number to whom permanent annuities can be granted. There will be no ballot on this occasion.





Right: Group at presentation of two mobile kitchens by non-European Argentine railway staff to Southern Railway staff, including Sir Francis Dent, Mr. E. J. Missenden, Lord Davidson, Mr. R. Holland-Martin, H.E. Señor Don Miguel Cárcano, Mr. J. M. Eddy, and Sir Sam Fay. One of the mobile kitchens is shown on the left

Notes and News

R. A. Lister & Co. Ltd.—An interim dividend of 5 per cent. is announced, the same as a year ago.

New Southern Railway Staff Canteen.—The Southern Railway opened a new staff canteen at Lancing Works (where carriage and wagon repairs are dealt with) on May 24. It is one of a number which will be opened at places where meal facilities are difficult.

Agreed Charges.—Applications for the approval of some 212 more agreed charges under the provisions of section 37 of the Road & Rail Traffic Act, 1933, have been lodged with the Railway Rates Tribunal. Notices of objection must be filed with the Registrar of the Tribunal on or before June 15.

John I. Thornycroft & Co. Ltd.—The directors have decided to pay the following interim dividends, on account of the financial year ending July 31, 1943, less income tax at the rate of 10s. in the £: 3 per cent. on the cumulative preference shares; 3¾ per cent. on the participating preferred ordinary shares; and 5 per cent. on the ordinary shares.

Kitchen & Wade Limited.—A final bonus of 5 per cent., less tax, has been declared in respect of the year ended March 31, 1942, bringing the total distribution for that year up to 30 per cent., the same as for the previous year. A second interim dividend of 12½ per cent. is to be paid for the year to March 31, 1943, in addition to the 12½ per cent. paid last October.

Railway Clerks Support Beveridge Plan.—The conference of the Railway Clerks Association at Blackpool passed a resolution on the Beveridge report, pledging support to ensure that the main principles were carried into legislative effect, and authorising the executive committee to take any steps necessary to protect the interests of the members of the R.C.A. and to safeguard their conditions of employment.

Institution of Locomotive Engineers.—A general meeting of the institution is to be held on June 10 at 5.30 p.m. in the hall of the Institution of Mechanical Engineers, Storey's Gate, Westminster, S.W.1, when a paper on the "Development of the Locomotive Poppet Valve Gear in America," by Mr. G. W. Alcock, Associate, Vice-President, Franklin Railway Supply Co. Inc., will be read, on the author's behalf, by Mr. E. W. Martin, B.Sc., member.

Jubilee of Rhodesia Railways.—On the fiftieth anniversary (May 23) of the incorporation of the Rhodesia Railways Limited, telegrams of congratulation were sent to the directors from the Prime Minister of Southern Rhodesia and the Governor of Northern Rhodesia. Tributes were paid to the loyal and efficient manner in which employees had continued to carry out their tasks during the war. The company was incorporated as the Bechuanaland Railway Co. Ltd.; the present title was not assumed until 1899.

Air Traffic in Argentina.—Statistics issued by Dirección General de Aeronáutica Civil relating to air traffic during the first quarter of 1943 show a considerable increase in passenger, mail, and parcels movement compared with the corresponding period of 1942. The aggregate number of trips made by the various air lines operating in Argentina totalled 1,181, against 1,045 in the period January to March, 1942. The total distance flown within the Republic was 374,463 miles, compared with 329,130 miles. The number of passengers carried was 15,836, compared with 12,856. Mail and parcels traffic also reached new record figures during the first quarter of the current year, amounting to 46,042,750 lb., and 204,571,370 lb., respectively; the corresponding figures for the first three months of 1942 were 41,856,952 lb. and 72,233,640 lb.

L.N.E.R. Debenture Stocks.—For the purpose of preparing the warrants for interest on the company's 3 per cent. and 4 per cent. debenture stocks and 4½ per cent. sinking fund debenture stock for the half-year ending June 30, 1943, the balances will be struck as at the close of business on June 10. Details are given in our Official Notices on page 571.

Leopoldina Railway Co. Ltd.—The company will on July 1 pay to the holders of its 4 per cent. debenture stock on the register on June 4, 1943, interest at 2 per cent. (actual) less tax, in respect of the half-year ended December 31, 1939. A similar payment in respect of the half-year to June 30, 1939, was made on January 1 last.

The Last Bus.—London Transport has issued a useful series of poster announcements for individual traffic centres entitled "Don't wait for the last bus or tram." These set out in tabulated form the bus or tram route, and the times and destinations of the last vehicles on both weekdays and Sundays, concluding with the injunction "there may not be room on it for you."

New Spanish Railway.—The new railway, connecting La Coruña with Santiago de Compostela in Galicia, was opened in April. The line represents the first section of a railway which ultimately is to connect La Coruña with Zamora, on the Salamanca-León line, by traversing the mountain region to the north of the Portuguese border. Santiago de Compostela was the terminus of a line extending northward from Vigo *via* Pontevedra, formerly owned by the Western Galicia Railway Company, which later was absorbed by the National Western Company (now a part of the National System of Spanish Railways).

New Argentine State Railways Locomotives.—The first of a series of 15 oil-burning locomotives has been completed in the workshops of the Argentine State Railways at Córdoba; it is reported on trial to have given very satisfactory results. These locomotives, which will be used for hauling passenger trains, are designed to burn petroleum on what is described as "a new system of economical combustion." Constructional details are not available at present, but it is stated that the cost of building the locomotives in Argentina is considerably below that of foreign-built engines of similar types.

L.N.E.R. Ambulance Trains.—Ambulance trains, one of which was available for inspection by directors and officers of the company at Liverpool Street Station on May 27, are being provided by the L.N.E.R. for service as and where required, of a type slightly different from those originally placed in service (see our issues of November 10 and December 8, 1939); the divergence is represented mainly by the internal fittings, which, in view of difficulties in respect of labour and materials, will be less elaborate. Administrative cars will be converted fully and stored out of use; but ward cars only will have the stretcher brackets and equipment for carrying Westinghouse brake-gear fitted, and then be returned to traffic as brake vans. When the trains are required, the ward cars will be taken into shops to have the brake gear and internal fittings completed, and to be painted; this work can be completed in a short time. In addition, the L.N.E.R. is providing a number of cars for trains which the Southern Railway is to equip; and is lending some open third class coaches to the L.M.S.R. for use as sitting-up cars on its ambulance trains.

Imperial Chemical Industries Limited.—It is stated in the report for the year 1942 that after making full provision for maintenance (including deferred maintenance), obsolescence and depreciation (including £2,500,000 for the company's central obsolescence and depreciation fund), income tax, N.D.C., and E.P.T., the net income was £6,499,859 which, with £865,487 brought forward makes £7,365,346. The

British and Irish Railway Stocks and Shares

Stocks	Highest 1942	Lowest 1942	Prices May 28, 1943	Prices Rise/Fall
G.W.R.				
Cons. Ord.	58	39	63	—
5% Con. Pref. ...	115½	105½	114	– ½
5% Red. Pref. (1950)	109½	103¾	108	—
5% Rt. Charge ...	133⅜	123⅜	129	—
5% Cons. Guar. ...	130⅜	121½	127½	– ½
4% Deb.	117	105	109½	– ½
4½% Deb.	118	108	111½	– 1
4½% Deb.	125	113	119½	– 1
5% Deb.	137	127	131	– 4
2½ Deb.	77	70	76	—
L.M.S.R.				
Ord.	28½	16⅛	33	+ ½
4% Pref. (1923) ...	63½	50½	63	—
4% Pref.	76½	67½	76½	– ½
5% Red. Pref. (1955)	103⅜	94⅜	104½	—
4% Guar.	104½	97½	100	+ 1
4% Deb.	108⅜	101½	105	..
5% Red. Deb. (1952)	111	107½	109½	—
L.N.E.R.				
5% Pref. Ord. ...	9⅜	2⅜	10⅜	—
Def. Ord.	5	1⅛	4⅜	—
4% First. Pref. ...	62	49½	63	—
4% Second Pref. ...	32½	18⅜	34½	—
5% Red. Pref. (1955)	95½	79	96½	—
4% First Guar. ...	98	88	96½	—
4% Second Guar. ...	90	78	90	—
3% Deb.	85	76	79½	– 1
4% Deb.	106⅜	100½	104	—
5% Red. Deb. (1947)	106	103	104½	—
4½% Sinking Fund Red. Deb.	106	102½	106½	—
SOUTHERN				
Pref. Ord.	77	61½	76	—
Def. Ord.	23½	14½	25	+ ½
5% Pref.	112⅜	104	112	– ½
5% Red. Pref. (1964)	110⅜	105½	112½	—
5% Guar. Pref. ...	131	121½	127½	– ½
5% Red. Guar. Pref. (1957)	115½	109½	114½	—
4% Deb.	116	104½	107½	– 1
5% Deb.	134	125½	131½	—
4% Red. Deb. (1962–67)	110⅜	106	108½	– 1
4% Red. Deb. (1970–80)	111	106½	108½	—
FORTH BRIDGE				
4% Deb.	109⅞	108	106	– 2
4% Guar.	105½	100	104½	—
L.P.T.B.				
4½% "A"	122½	111	117½	– 1
5% "A"	131½	122	127½	– 2
3% Guar. (1967–72)	95⅜	97⅜	100	—
5% "B"	121	111¼	117½	—
"C"	56½	38	61½	—
MERSEY				
Ord.	27½	20½	29½	—
3% Perp. Pref. ...	61½	56½	61	—
4% Perp. Deb. ...	102½	99½	104	—
3% Perp. Deb. ...	80½	76	79	—
IRELAND				
BELFAST & C.D.				
Ord.	9	4	9	—
G. NORTHERN				
Ord.	29⅜	12½	19	— ½
G. SOUTHERN				
Ord.	25	10	10	+ ½
Pref.	29	12½	13	—
Guar.	53	35⅜	30½	+ 1½
Deb.	71½	55½	55½	– 2½

§ ex-dividend

OFFICIAL NOTICES

OFFICIAL ADVERTISEMENTS

OFFICIAL ADVERTISEMENTS intended for insertion on this page should be sent in as early in the week as possible. The latest time for receiving official advertisements for this page for the current week's issue is 9.30 a.m. on the preceding Monday. All advertisements should be addressed to:—*The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1.

London and North Eastern Railway

NOTICE is hereby given that, for the purpose of preparing the warrants for Interest on the Company's 3 per cent. and 4 per cent. Debenture Stocks and 4½ per cent. Sinking Fund Debenture Stock for the half-year ending 30th June, 1943, the balances will be struck as at the close of business on 10th June, and Interest will be payable only to those Stockholders whose names are registered on that date.

Transfers of the above-mentioned Stocks should, therefore, be lodged with the Registrar of the Company at Hamilton Buildings, Liverpool Street Station, London, E.C.2, before 5 p.m., on the 10th June.

By Order.
W. H. JOHNSON,
Secretary.

Marylebone Station,
London, N.W.1.
31st May, 1943.

Now on Sale

Universal Directory of Railway Officials and Railway Year Book

48th Annual Edition, 1942-43

This unique publication gives the names of all the principal railway officers throughout the world together with essential particulars of the systems with which they are connected. Much general and statistical information about railways is also concisely presented.

Price 20/- net.

THE DIRECTORY PUBLISHING CO., LTD.,
33, Tothill Street, Westminster, S.W.1

directors have allocated to war contingency reserve £601,595, and to a war personnel reserve £100,000. The final dividend on the ordinary stock is 5 per cent., making 8 per cent. for the year, less tax at 9s. 4d. in the £, and the carry-forward is £965,499.

Great Western of Brazil Railway Co. Ltd.—Payment has been announced of the full interest due July 1, 1941, and January 1, 1942, on the 6 per cent. permanent debenture stock and on the 4 per cent. debentures, together with interest on arrears. Warrants for the debenture stock interest were posted on June 1, and coupons Nos. 61 and 62 of the 4 per cent. debentures were payable on June 2 on presentation to Glyn Mills & Co., 67, Lombard Street, E.C.3. Interest on the 6 per cent. stock and on the 4 per cent. debentures for the half-year to December 31, 1940, was paid, plus interest thereon, on January 30, 1943.

Bristol Commercial Vehicles.—Towards the end of May a company entitled Bristol Commercial Vehicles Limited, was formed with the object of carrying on the business of manufacturers and repairers of and dealers in motor vehicles, engines, parts, and accessories. The directors are: Sir Frederick Heaton, Chairman of the Bristol Tramways & Carriage Co. Ltd.; Mr. Francis J. Chapple, a Director of the Bristol Tramways & Carriage Co. Ltd., and Mr. Arnold J. Romer, a Director of Short Bros (Rochester & Bedford) Ltd. and General Manager of the manufacturing section of the Bristol Tramways & Carriage Co. Ltd. Nominal capital is £100.

Skefko Ball Bearing Co. Ltd.—This company is the British unit of the organisation controlled by the Swedish Ball Bearing Company. The trading balance for 1942, after charging for depreciation and making provision for taxation, is £178,224 (£172,567). After providing £2,029 (£1,968) for director's fees the net profit is £176,195 (£170,599), and £150,852 was brought in. A sum of £50,000 is allocated to pension scheme, but no allocation is made from 1942 profits to general reserve, which received £30,000 a year ago. The final dividend is 10⅝ per cent., tax free, making with the interim dividend of 6⅜ per cent., tax free, 17½ per cent., tax free, for the year (same), leaving £137,047 to be carried forward.

Southern Railway Tea Bars.—The first of the Southern Railway tea bars, which are to be erected at stations as and when required, has been opened on the down platform at Andover Junction Station. Previously, no refreshment facilities existed on this platform, and passengers had to proceed by the subway to the refreshment room on the up platform. The tea bar is provided for the sale of tea, coffee, cocoa, sandwiches, and buns; it is available for serving members of H.M. Forces, and also civilian passengers.

Brush Electrical Engineering Co. Ltd.—The Manchester branch of the Brush Electrical Engineering Co. Ltd., Petters Limited, and Brush Coachwork Limited, has been removed from Daimler House, Wilmslow Road, Rusholme, to Yorkshire House, 45, Cross Street, Manchester, 2.

The Public Transport Association.—Further steps have now been taken concerning the proposed merger of the Omnibus Owners' Association and the Public Service Transport Association, and a provisional agreement between the two bodies was entered into on May 10 last. This agreement comes up for approval at an extraordinary general meeting of the P.S.T.A. which has been convened for June 16. The new association is to be called the Public Transport Association Inc. The report and accounts of the P.S.T.A. for the year ended December 31, 1942, show revenue for the year at £1,373 and expenditure at £1,425, leaving a debit balance of £52 compared with a credit balance of £20 for the year 1941. After subtracting this debit balance from the surplus of former years, there is a total net surplus of £1,430. Investments at December 31, 1942, amounted to £1,272 in Government Securities. The plan of merger of the two associations provides for a payment of £2,750 as compensation for loss of office to Mr. Laurence G. Oldfield, the retiring Secretary of the Omnibus Owners' Association.

A. Reyrolle & Co. Ltd.—After providing for depreciation, renewals, and taxation, the profit for the year 1942, including interest on investments and loans, was £125,908. Add balance brought forward (less £2,500 voted for charitable funds) £142,921, making £268,829. Transfers are made of £40,000 to general reserve and of £35,000 to development expenditure account. The final dividend on the ordinary stock is 7½ per cent., less tax, making 12½ per cent., less tax, for the year.

Colvilles Limited.—Trading profit for the year 1942, after providing for taxation and war damage insurance, amounted to £513,323 (£523,759) and net dividends from subsidiary companies were £109,212 (£79,437), making a total profit of £622,535 (£603,196). Adding £157,710 brought forward makes £780,245. The allocation for depreciation and obsolescence is £250,000 (£300,000) and £100,000 (nil) is appropriated for deferred repairs. After providing for directors' fees, preference dividend, and interim ordinary dividend of 3 per cent., less tax, there is a balance of £264,952. The final dividend is 5 per cent., less tax, again making 8 per cent. for the year, and the amount carried forward is £166,963.

Tea bars are to be provided by the Southern Railway as required for the convenience of passengers at busy centres. Above is shown the first tea bar to be installed, at Andover Junction Station

Railway Stock Market

The main factor dominating Stock Exchange markets has again been the widespread disposition to await the next big development in the war situation. The volume of business has shown a further decline, and, in the absence of better demand, there has been a slightly reactionary trend in many directions. Nevertheless, all classes of securities remained held quite firmly, and this and other indications of confidence in the future assisted sentiment. It was not to be expected that, with markets in their present inactive condition, home railway securities would move against the general trend, despite the attractive yields on the prior charges and the substantial return offered by junior stocks. Prior charges and other senior stocks have so far made very little response to the better trend in gilt-edged securities. Nevertheless, in some instances, fractional improvement was shown; and in some cases it was not easy to obtain stock in any amount at around prices indicated by current quotations. The heavy decline in prior charges which commenced mainly in sympathy with the recent decline in gilt-edged was attributed partly to reduced demand, and at the present time demand has not shown any strong recovery. Nevertheless, the prevailing view is that, when markets become active, the fact that home railway senior stocks offer yields which compare very favourably with those obtainable in other sections of the Stock Exchange, is bound to attract a good deal of attention. Sentiment as to junior stocks appears to be influenced more by the sacrifices made by shareholders during the period of the war than by the fact that yields are substantial, and that dividends at around current rates can be considered as virtually guaranteed by the Government until at least one year after the termination of hostilities. In fact, home railway junior stocks are one of the few groups of equity securities which may offer possibilities of good appreciation in price as time proceeds, both on the basis of good current yields and the dividend outlook.

Fluctuations have ruled in Argentine railway securities. The statements in the circular to debenture holders of the Buenos Ayres Western requesting extension of the moratorium tended to draw increased attention to the difficulties of railways operating in the Argentine. Sentiment was not influenced materially by the Central Argentine payment of 4½ per cent. arrears on the 4 per cent. debentures. This payment has been made possible by the release of exchange remittances at the special rate of 16 pesos to the £; but it is realised that until the authorities in the Argentine accord the railways better treatment in respect of exchange, there will be little scope for recovery in the position of the railways.

Compared with a week ago, Great Western ordinary was little changed at 62⅝, compared with 62¾; on the other hand, the 4 per cent. debentures and 5 per cent. preference were each half-a-point lower at 109½ and 113½ respectively. There was, however, a recovery from 99 to 100½ in L.M.S.R. guaranteed, the yield of around 4 per cent. having attracted some improvement in demand. L.M.S.R. ordinary was little changed on balance at 32¾, compared with 33 a week ago; the 1923 preference was slightly lower at 62½, but the senior preference at 76½ was unchanged on balance. L.N.E.R. first guaranteed recovered a point to 97½; the first preference kept at 62½, although the second preference eased to 34¾. Southern deferred at 24⅞ was unchanged on balance, but the preferred eased to 75¾; the 4 per cent. debentures were lower at 107½, but the 5 per cent. preference kept at 112. London Transport "C" was 61½, compared with 61¾ a week ago.

Among Argentine railway securities, the debentures reflected the reactionary trend in this section; B.A. Gt. Southern 4 per cents were 60½, compared with 62 a week ago. Elsewhere, San Paulo ordinary eased to 69½. French railway bonds recorded further gains. Canadian Pacifics showed a better tendency.

Traffic Table and Stock Prices of Overseas and Foreign Railways

	Railways	Miles open	Week ending	Traffic for week: Total this year	Traffic for week: Inc. or dec. compared with 1941/2	No. of Weeks	Aggregate traffics to date: Totals 1942/3	Aggregate traffics to date: Totals 1941/2	Aggregate traffics to date: Increase or decrease	Shares or stock	Prices: Highest 1942	Prices: Lowest 1942	Prices: May 28 1943	Yield % (See Note)
				£	£		£	£	£					
South & Central America	Antofagasta (Chili) & Bolivia	834	23.5.43	37,490	+ 15,780	21	563,410	437,790	+ 125,620	Ord. Stk.	14	7⅞	13½	Nil
	Argentine North Eastern ...	753	22.5.43	13,470	+ 1,446	47	579,858	505,704	+ 74,154	„	6½	3	6½	Nil
	Bolivar	174	Apr., 1943	5,550	+ 1,220	16	21,881	18,458	+ 3,423	6 p.c. Deb.	19¾	10	20½	Nil
	Brazil	—	—	—	—	—	—	—	—	Bonds	20½	9	22½	Nil
	Buenos Ayres & Pacific ...	2,807	22.5.43	92,700	— 2,100	47	4,694,640	4,115,760	+ 578,880	Ord. Stk.	7⅞	4	6½	Nil
	Buenos Ayres Great Southern	5,080	22.5.43	171,420	+ 27,300	47	7,576,080	6,897,780	+ 678,300	Ord. Stk.	12½	7¼	12¾	Nil
	Buenos Ayres Western ...	1,930	22.5.43	57,540	+ 1,140	47	2,545,740	2,417,940	+ 127,800	„	12¾	6	12½	Nil
	Central Argentine	3,700	22.5.43	121,599	+ 6,870	47	6,172,008	4,945,026	+ 1,226,982	„	9¾	4⅛	8¾	Nil
	Do.	—	—	—	—	—	—	—	—	Dfd.	3¾	2¼	4	Nil
	Cent. Uruguay of M. Video...	972	22.5.43	39,498	+ 12,588	47	1,373,876	1,193,664	+ 180,212	Ord. Stk.	8	4	6¼	Nil
	Costa Rica	262	Feb., 1943	17,896	— 3,118	35	114,452	180,476	— 66,024	Stk.	16½	11	15	Nil
	Dorada	70	Jan., 1943	6,000	+ 3,530	4	—	—	—	1 Mt. Db.	90½	89	94½	6½
	Entre Rios	808	22.5.43	17,454	+ 1,578	47	830,214	728,160	+ 102,054	Ord. Stk.	33	4¾	7¼	Nil
	Great Western of Brazil ...	1,030	22.5.43	18,700	+ 10,600	20	328,600	212,900	+ 115,700	Ord. Sh.	9/-	9/-	49/9	Nil
	International of Cl. Amer. ...	794	Apr., 1943	$643,460	+ $92,059	16	$2,665,812	$2,597,912	+ $67,900	—	—	—	—	—
	Interoceanic of Mexico ...	—	—	—	—	—	—	—	—	1st Pref.	1⅛	5/3	2	Nil
	La Guaira & Caracas... ...	22¾	Apr., 1943	8,440	+ 2,132	16	35,875	26,170	+ 9,705	5 p.c. Deb.	11¼	5	83½§	Nil
	Leopoldina	1,918	22.5.43	31,861	+ 3,775	20	657,859	606,751	+ 51,108	Ord. Stk.	6¾	3⅛	6½	Nil
	Mexican	483	21.5.43	ps. 335,400	+ ps. 10,900	19	ps. 7,224,600	ps. 7,012,900	+ ps. 211,700	Ord. Stk.	1	⅛	1¼	Nil
	Midland Uruguay	319	Mar., 1943	18,039	+ 2,103	36	134,739	123,127	+ 11,612	—	—	—	—	—
	Nitrate	382	15.5.43	5,135	— 2,654	17	55,150	54,875	+ 275	Ord. Sh.	77/	3⅛	80/-	Nil
	Paraguay Central	274	21.5.43	$4,666,000	+ $ 14,000	47	$191,861,000	$168,321,000	+ $23,540,000	Pr. Lt. Stk.	53	40	52½	11⅛
	Peruvian Corporation ...	1,059	Apr, 1943	89,811	+ 9,084	40	847,392	752,443	+ 94,949	Pref.	19⅞	5⅛	15¾	Nil
	Salvador	100	Mar., 1943	c 140,000	+ c 14,000	38	c 912,000	c 782,172	+ c 129,828	—	—	—	—	—
	San Paulo	153½	16.5.43	39,008	+ 2,474	20	719,630	695,568	+ 24,062	Ord. Stk.	59	41	70	2⅛
	Taltal	160	Apr., 1943	2,470	— 2,735	21	43,816	44,220	— 404	Ord. Sh.	41/-	23/-	32/6	Nil
	United of Havana	1,301	22.5.43	47,765	+ 11,807	47	2,405,574	1,490,801	+ 914,773	Ord. Stk.	8½	2½	6½	Nil
	Uruguay Northern	73	Mar., 1943	1,591	461	39	12,659	11,090	+ 1,569	—	—	—	—	—
Canada	Canadian Pacific	17,034	21.5.43	1,120,000	+ 128,000	20	20,659,600	18,619,800	+ 2,039,800	Ord. Stk.	16¼	9⅞	16½	Nil
India†	Barsi Light	202	Jan., 1943	22,440	+ 10,612	42	172,958	135,863	+ 37,095	—	—	—	—	—
	Bengal & North Western ...	2,090	Nov., 1942	264,975	— 33,087	8	449,400	561,082	— 111,682	—	—	—	—	—
	Bengal-Nagpur	3,267	Feb., 1943	932,775	+ 84,975	46	10,031,400	9,111,000	+ 920,400	Ord. Stk.	102½	88	103½	3⅛
	Madras & Southern Mahratta	2,939	10.3.43	269,025	+ 43,993	47	8,175,789	6,903,392	+ 1,272,397	„	105½	87	108½	5½
	Rohilkund & Kumaon ...	571	Nov., 1942	555,750	+ 5,072	8	115,950	99,909	+ 16,041	—	—	—	—	—
	South Indian	2,402	10.1.43	166,555	+ 778	39	4,928,736	4,148,309	+ 780,427	„	103½	88⅛	102½	4⅞
Various	Egyptian Delta	607	31.3.43	15,554	+ 3,703	44	474,050	349,338	+ 124,712	Prf. Sh.	5⅛	1⅛	4	Nil
	Manila	—	—	—	—	—	—	—	—	B. Deb.	44	35	36	9⅜
	Midland of W. Australia ...	277	Mar., 1943	33,862	+ 15,274	36	286,570	177,483	+ 109,087	Inc. Deb.	95	90	98	6⅛
	Nigerian	1,900	27.2.43	72,670	— 24,705	46	3,262,161	2,894,620	+ 367,541	—	—	—	—	—
	South Africa	13,291	24.4.43	807,564	+ 22,419	3	2,932,228	2,642,471	+ 289,757	—	—	—	—	—
	Victoria	4,774	Jan., 1943	1,480,058	+ 169,521	—	—	—	—	—	—	—	—	—

Note. Yields are based on the approximate current prices and are within a fraction of ⅛

† Receipts are calculated @ 1s. 6d. to the rupee

Argentine traffics are given in sterling calculated @ 16⅛ pesos to the £

§ ex dividend